

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

**In the Matter of:**

**911 Fee Diversion**

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**PS Docket No. 20-291**

**PETITION FOR DECLARATORY RULING**

Through its attorneys, South Sound 911<sup>1</sup> submits this request that the Federal Communications Commission’s (“FCC” or “Commission”) Ending 9-1-1 Fee Diversion Now Strike Force (“Strike Force” or “911 Strike Force”) issue a declaratory ruling that certain expenditures made by Pierce County, Washington (the “County”) using funds collected through the enhanced 911 excise tax are impermissible diversions under federal and state law and the FCC’s rules.

The Commission’s 911 Strike Force has been tasked with the important goal of ending the long-standing issue of 911 fee diversion. In 2017, then FCC Commissioner Michael O’Rielly wrote that, “[i]t is unconscionable that some states divert fees collected for legitimate and needed 9-1-1 communications capabilities to unrelated purposes, threatening the public’s safety for short-term budget relief. After almost fifteen years of working on the problem, we are no closer to resolving it.”<sup>2</sup> He noted that many states are “repeat offenders” dating back to the Commission’s first report in 2009.<sup>3</sup> Commissioner O’Rielly spent several years working with now Acting Chairwoman Jessica Rosenworcel to develop policies and highlight diversionary practices in hopes of ending 911 fee diversion.<sup>4</sup> Concerted efforts at the Commission,

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<sup>1</sup> Peter Beckwith, General Counsel of South Sound 911, is a member of the 911 Strike Force Working Group Three (“Impacts of 911 Fee Diversion”). Mr. Beckwith has disclosed this, as required, and will recuse himself from any discussion, consideration or deliberation of this Petition.

<sup>2</sup> Michael O’Rielly, *States Must Stop Raiding 9-1-1 Fees*, FCC Blog (Mar. 1, 2017), available at: <https://www.fcc.gov/news-events/blog/2017/03/01/states-must-stop-raiding-9-1-1-fees>.

<sup>3</sup> *Id.*

<sup>4</sup> Michael O’Rielly and Jessica Rosenworcel, *States are stealing funds from 9-1-1 emergency services – now they’ll be punished*, THE HILL (Feb. 9, 2018), <http://thehill.com/opinion/technology/373043-statesare-stealing-funds-from-9-1-1-emergencyservices-now-theyll-be> (O’Rielly/Rosenworcel Op-Ed); Letter from Michael O’Rielly and Jessica Rosenworcel to Republican and Democratic Governors Associations re 911 Fee Diversion, July 31, 2018, <https://docs.fcc.gov/public/attachments/DOC-353114A1.pdf> (O’Rielly/Rosenworcel Letter).

Congressional, and state levels have led to the Commission’s recent 911 Fee Diversion Order, which offers clearer prohibitions of 911 fee diversion and establishes the 911 Strike Force.<sup>5</sup>

## **BACKGROUND**

South Sound 911 is the result of a technological upgrade and consolidation efforts that started in 2011. In the past 10 years, five 911 centers in the County have been consolidated under South Sound 911, and an integrated, reliable radio system is being built to provide better protection for first responders and safer communities. In 2021 the agency completed construction of its new state-of-the-art facility in Tacoma, Washington.

In 2020, South Sound 911 received 527,033 calls to 911. More than 84 percent of these calls were placed from cellular phones, more than 96 percent were answered within 20 seconds or less, and the average processing time of high-priority calls was 72 seconds. South Sound 911 is also capable of receiving texts to 911 and received 2,649 text messages last year.

South Sound 911 is funded through a \$0.70 excise tax collected by the Pierce County E-911 Program Office (“enhanced 911 excise tax” or “E911 Excise Tax”). The Program Office allocates \$0.20 directly to South Sound 911 and the remaining \$0.50 is managed by the Program Office. A portion of the funds managed by the Program Office also are remitted to South Sound 911, but the amount varies. In 2020, South Sound 911 received \$4,772.080 from this excise tax and the Program Office retained \$4,157,531.

## **WASHINGTON STATE LAW**

The State of Washington allows Counties to impose a County enhanced 911 excise tax on the use of switched access lines and interconnected voice over internet protocol (“VoIP”) service lines in an amount not exceeding seventy cents per month for each line.<sup>6</sup> The Washington State Code requires the tax to be deposited in the county enhanced 911 excise tax account and mandates that Counties imposing an enhanced 911 excise tax provide an annual update detailing the proportion of their enhanced 911 excise tax that is being spent on: (i) modernizing their existing enhanced 911 communications system; and (ii) enhanced 911 operational costs.<sup>7</sup> The law in Washington is also clear that the proceeds of the enhanced 911 excise tax, “shall be used by the County only for the emergency services communication system.”<sup>8</sup>

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<sup>5</sup> *911 Fee Diversion; New and Emerging Technologies 911 Improvement Act of 2008*, PS Docket Nos. 20-291 and 09-14, Report and Order, FCC 21-80 (June 24, 2021) (“Order” or “911 Fee Diversion Order”).

<sup>6</sup> RCW 82.14B.030 (1).

<sup>7</sup> *Id.*, at (4)(a-b).

<sup>8</sup> RCW 38.52.510. In enacting this law, the legislature determined that counties needed an additional revenue source to fund emergency service communication systems on a county-wide basis. The term “emergency services

Late last year, the Washington State E911 Officer provided guidance on what the State Enhanced 911 Coordination Office (“SECO”) deems to be permissible “emergency services communication system” expenses.<sup>9</sup> The letter states that

The [Washington State] legislature intended the 911 excise tax revenue to be spent on incoming 911 calls and not on services for first responders. Although first responder services are also vital, such an interpretation would severely impact the counties’ and state’s ability to meet the first need—the ability to accept and route 911 calls to the appropriate PSAP.<sup>10</sup>

The letter also outlines statutory priorities for available enhanced 911 funding, which were amended to include “an enhanced 911 emergency communications system.”<sup>11</sup> This amendment was added, “not to indicate that counties could spend the money on dispatching and other services, but in acknowledgment of the new ESInet and telephone equipment for future enhanced 911 features.” Therefore, this language does not expand the purpose for which enhanced 911 excise tax funds may be expended. Instead, it provides flexibility for counties to expend enhanced 911 excise taxes on emerging 911 technologies that support “*incoming 911 calls*.” The letter makes clear that funds from the 911 excise tax must be prioritized to first fully fund the ability to accept and route calls to the appropriate PSAP.<sup>12</sup>

### **Request for Investigation and Determination by the 911 Strike Force**

In some instances, 911 excise tax funds in Pierce County are not being spent on technologies that support incoming 911 calls in violation of federal and state law. In other instances, it is impossible to determine how certain 911 excise tax funds have been expended. Regardless, it is imperative that the Strike Force initiate an investigation and ultimately determine whether the expenditures of 911 excise tax funds outlined below constitute impermissible diversion of 911 excise tax funds under the current rules. In the Order

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communication system,” means “a county-wide radio or landline communications network, 911 telephone system, which provides rapid public access for coordinated dispatching of services, personnel, equipment and facilities for police, fire, medical or other emergency services.” County Emergency Services Communication Systems (911) Telephone Access Line Excise Tax, Washington State Legislature, Forty-Seventh Legislature, House Bill No. 484 (1981), at Section 1.

<sup>9</sup> See Attachment 1 (“December 15 Letter”), at p. 1.

<sup>10</sup> Id at p. 3.

<sup>11</sup> RCW 38.52.545. This is consistent with federal law, which supports the State’s ability to collect such a tax and obligates the State to use such a tax only “for the support or implementation of 9–1–1 or enhanced 9–1–1 services, provided that the fee or charge is obligated or expended only in support of 9–1–1 and enhanced 9–1–1 services, or enhancements of such services[.]” 47 U.S.C. § 615a-1(f)(1).

<sup>12</sup> December 15 Letter, at p. 2-3.

establishing the Strike Force, the Commission noted that permissible expenditures of 911 fees are limited to, “the support and implementation of 9-1-1 services provided by or in the state or taxing jurisdiction imposing the fee or charge, and operational expenses of public safety answering points within such state or taxing jurisdiction.”<sup>13</sup> Any use of 911 fees outside this scope constitutes a 911 fee diversion.

South Sound requests the FCC determine whether Pierce County’s use of at least a portion of the E911 excise tax constitutes an impermissible fee diversion. Two expenditures in particular are problematic.

First are expenditures to fund a Combined Communications Network (“CCN”) that supports, “the development, operation, maintenance, and sustainment of a combined radio communication interoperability network for purposes of ensuring communications for Pierce Transit’s system and for the County’s public safety community as well as for the benefit of such other public agencies as added in the future.”<sup>14</sup> According to its 2020-2021 budget, the CCN is slated to receive more than \$2.3 million from the enhanced 911 excise tax.<sup>15</sup> This represents approximately one-third of CCN’s projected 2020-2021 budget.<sup>16</sup> Just one year prior, in 2019, approximately \$1.15 million was spent on CCN radio fees.<sup>17</sup> South Sound 911 is not the only organization that believes such expenditures were impermissible diversions. The Washington State E911 Officer explained in an April 2021 letter that funding land mobile radios for the CCN was not an appropriate use of the E911 excise tax.<sup>18</sup>

The second project is even further removed from the underlying purpose of the enhanced 911 excise tax. Several years ago, enhanced 911 excise tax funds were used to build and operate

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<sup>13</sup> *911 Fee Diversion; New and Emerging Technologies 911 Improvement Act of 2008*, PS Docket Nos. 20-291 and 09-14, Report and Order, FCC 21-80 (June 24, 2021) (“Order” or “911 Fee Diversion Order”) (quoting and explaining 47 U.S.C. § 615a-1(f)(3)(A) (as amended); section 902(c)(1)(C)).

<sup>14</sup> See Combined Communications Network, “2018-2021 Strategic Plan,” at p. 5 (Mar. 14, 2018), available at: <https://www.piercecountywa.gov/DocumentCenter/View/68008/2018-2021-Strategic-Plan>; See generally CCN Executive Director, “Single Countywide Communications System: Overview,” (July 12, 2017), at 16-29 (listing Network Users, including “General Government” entities such as Airport and Ferry, Admin, Sewer Utility, and Surface Water), available at: [https://www.piercecountywa.gov/DocumentCenter/View/63029/CCN\\_SCWCS-Layers-Diagram-with-details-and-cover-statement-posted](https://www.piercecountywa.gov/DocumentCenter/View/63029/CCN_SCWCS-Layers-Diagram-with-details-and-cover-statement-posted).

<sup>15</sup> A Resolution of the Executive Board of the Combined Communications Network (CCN) Enterprise Adopting the 2020-21 Budget for the Pierce Transit - Pierce County Combined Communications Network; Executive Board of the CCN, Resolution No. R2019-002 (2019), at p. 9, available at: <https://www.piercecountywa.gov/DocumentCenter/View/85946/CCN-Budget-2020-2021->.

<sup>16</sup> *Id.*

<sup>17</sup> Combined Communications Network “2019 CCN Budget,” at p. 7, available at: [https://www.piercecountywa.gov/DocumentCenter/View/75335/CCN\\_2019-Budget-](https://www.piercecountywa.gov/DocumentCenter/View/75335/CCN_2019-Budget-); and See Attachment 3 (“2019 E911 Office Cost Summary”), at Line 26.

<sup>18</sup> See Attachment 2 (“April 14 Letter”).

a Distributed Antenna System (“DAS”) in the Pierce County Jail to improve in-building voice and data coverage. As described in the capital improvement projects,

Pierce County’s 700 MHz Single County-Wide Communications System (SCWCS) has been implemented as the primary communications network to unify radio communication among law enforcement agencies and other first responders in the South Sound. However, there is limited coverage for the Jail and Pierce County-City Building (CCB). To ensure that the Jail and the CCB have uninterrupted coverage to the 700 MHz SCWCS, it is necessary to implement a Distributed Antenna System (DAS). This system will be designed to provide coverage from the Pierce County SCWCS inside to the Jail and CCB. The DAS will include the design and implementation of the donor equipment, head end equipment, and distribution system for a complete in-building solution that provides coverage for 97% of each floor for both mobile and portable on-hip radios.<sup>19</sup>

The total cost of this system was estimated at \$2 million, with budgeted operational costs of \$125,000 annually through 2023. Internal financial analysis shows that \$700,000 in funds from the enhanced 911 excise tax went to the Jail DAS Project.<sup>20</sup> This is an important project. But it is not one that should have been funded with enhanced 911 excise tax funds.

These are just two examples of impermissible fee diversions that occurred in Pierce County. The Office of the Washington State Auditor conducted an audit of Pierce County’s use of this tax during the period from January 1, 2017 to December 31, 2018. In a summary of the audit’s findings, the audit manager stated that they, “identified \$410,000 in spending for purposes that did not meet the definition of an emergency services communication system.”<sup>21</sup>

Around the same time, South Sound 911 engaged a third-party consultant to assess and issue recommendations on radio systems, dispatch operations, and the sustainability of South Sound 911. As part of this evaluation, the consultant examined the County’s administration of the E911 Excise Tax and found that it was challenging to understand how the County expended enhanced 911 excise tax funds. The report explains that the County’s, “reporting on the use of E911 excise tax funds lacks consistency and clarity,” noting that the County provides a high level annual report and that the use of the funds are not well documented.<sup>22</sup> The report further

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<sup>19</sup> Pierce County, “Capital Improvement Program” (2019), at p. 19, available at: <https://www.piercecountywa.gov/DocumentCenter/View/73392/Capital-Improvement-Program?bidId=>.

<sup>20</sup> See 2019 E911 Office Cost Summary at Line 27.

<sup>21</sup> See Attachment 4 (“Audit Letter”), at p. 2

<sup>22</sup> See Attachment 5 (“DELTAWRX Final Report”), at pp. 29-30.

states that “[d]ecision-making regarding how the E911 funds are used lacks transparency, input and accountability[.]”<sup>23</sup> The County’s Department of Emergency Management (“DEM”) was unable to provide detailed and comprehensive information on how the DEM makes decisions regarding the use of the funds.

Ultimately, the consultant determined that opinions on permissible expenditures from the enhanced 911 excise tax differ. The County believes these funds can be used for any part of the County’s communications system. However, SECO and South Sound 911 believe Washington law is clear that these funds should be used to support “the ability to accept and route 911 calls to the appropriate PSAP.”<sup>24</sup> The consultant reviewed the County’s expenditures and found that about half the 2018 budgeted expenditures are for these 911-focused purposes. The other half of the budget was spent on “county overhead, radio system support (including for the jail), and support for County emergency management operations unrelated to E911 operations.”<sup>25</sup> This is contrary to federal and state law, conflicts with the guidance provided by SECO and constitutes an impermissible diversion of 911 funds.

However, documentation regarding these projects and expenditures provide limited accounting details. Because there is disagreement over how Pierce County spent funds from the E911 Excise Tax, this situation would also provide the opportunity for the 911 Strike Force to issue guidance regarding what type of documentation should be kept to account for the use of 911 fees.<sup>26</sup> In addition to the disagreement about what monies were directed towards the CCN and the Jail DAS Project, there is also lack of clarity regarding funds used towards overhead and other indirect costs. This provides the Strike Force the opportunity to provide guidance on what constitutes a “transfer of 911 fees into a general fund or other fund for non-911 purposes.”<sup>27</sup>

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<sup>23</sup> *Id.*, at p. 31.

<sup>24</sup> December 15 Letter, at p. 3.

<sup>25</sup> DELTAWRX Final Report, at 34.

<sup>26</sup> See 47 U.S.C. § 615a-1 Statutory Notes (as amended); section 902 (3)(A). Section 902 tasks the Strike Force with studying “how the Federal Government can most expeditiously end diversion by a State or taxing jurisdiction of 9–1–1 fees or charges.” Determining what constitutes proper documentation and accounting for 911 expenditures serves this purpose.

<sup>27</sup> See Fee Diversion Order, at para. 46.

## Conclusion

Based on the facts described herein, South Sound 911 requests that the 911 Strike Force issue a declaratory ruling regarding whether Pierce County impermissibly diverted 911 fees collected under the E911 Excise Tax. If the 911 Strike Force makes such a determination, South Sound 911 also requests that the 911 Strike Force require all funds collected from the E911 Excise Tax be directed to South Sound 911 to ensure the funds are used in accordance with federal and state law to directly support 911 services.

Respectfully submitted,



Submitted: August 4, 2021

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# **ATTACHMENT 1**





**STATE OF WASHINGTON  
MILITARY DEPARTMENT  
EMERGENCY MANAGEMENT DIVISION  
MS: TA-20 Building 20  
Camp Murray, Washington 98430-5122  
Phone: (253) 512-7000 · Fax (253) 512-7207**

December 15, 2020

Washington State 911 County Coordinators

RE: SECO interpretation on 911 Excise Tax Fund Use

Dear County Coordinators,

In response to questions posed concerning the use and limits of 911 funds, I wanted to provide the SECO's perspective and interpretation of the relevant RCW's especially with respect to the phrase "emergency communications system".

Proceeds from the 911 excise tax 'shall be used by the county only for the emergency services communication system.' RCW 82.14B.050. The Legislature defined 'emergency services communication system' as a 'countywide communications network, including an enhanced 911 emergency communications system, which provides rapid public access for coordinated dispatching of services, personnel, equipment and facilities for police, fire, medical or other emergency services.' RCW 82.14B.020(2).

"Enhanced 911 emergency communications system" means a public communications system consisting of **a network, database, and on-premises equipment that is accessed by dialing or accessing 911 and that enables reporting police, fire, medical, or other emergency situations to a public safety answering point. The system includes the capability to selectively route incoming 911 voice or data to the appropriate public safety answering point that operates in a defined 911 service area and the capability to automatically display the name, address, and telephone number of incoming 911 voice or data at the appropriate public safety answering point.** These definitions must be read together and contain two key phrases: "network" and "which provides rapid public access". The money that is collected pursuant to the E911 excise tax, is clearly, looking at the legislative history, always been intended by the Legislature to be spent specifically on the 911 system, which includes the Emergency Services IP network (ESInet) and the equipment necessary for county and Washington State Patrol Public Service Answering Points (PSAP) to accept and route 911 calls. The phrase "which provides rapid public access for," demonstrates the intent to use the money to provide for access by the public to 911 services and dispatch services by the county. We do not read the "for" as an "and" which you could argue would allow the use of 911 excise tax money for dispatching and other services provided after a call is

routed. The language “for **coordinated** dispatching of services, personnel, equipment and facilities for police, fire, medical or other emergency services” is a description of what the 911 call routing will achieve, not services to be provided by the tax dollars.

The counties’ authority to impose an excise tax on telephone lines for 911 services was created in 1981 in RCW 82.14B. In 1991, the state was authorized to impose a similar tax to be administered by the State E911 Coordinator’s Office for county E911 services in RCW 38.52.500-577. These statutes must be read together, as the provisions were created or revised in the same in bills over time. A reading of the bills demonstrates an intent to use the 911 excise taxes to ensure an available 911 dialing system for incoming calls from the public.

The distinction about how the money may be spent is important. The State E911 Coordinator’s Office was created to administer E911 excise tax monies collected and to supplement counties’ 911 services for specific things. “Moneys in the account must be used only to support the statewide coordination and management **of the enhanced 911 system**, for the **implementation of wireless enhanced 911 statewide**, for the **modernization of enhanced 911 emergency communications systems statewide**, and to help **supplement, within available funds, the operational costs of the system**, including adequate funding of counties to enable implementation of wireless enhanced 911 service ....” Further the statute requires that [f]unds generated by the enhanced 911 excise tax imposed by RCW 82.14B.030(6) may not be distributed to any county that has not imposed the maximum county enhanced 911 excise tax allowed under RCW 82.14B.030(2). RCW 38.52.540(2). The Legislature understood that the excise tax collected by the state would be insufficient to fund all needs and required that counties first collect the county portion and then only allowed the state to spend the state taxes on certain priorities:

In specifying rules defining the purposes for which available state enhanced 911 moneys may be expended, the state enhanced 911 coordinator, with the advice and assistance of the enhanced 911 advisory committee, **must consider base needs of individual counties for specific assistance**. Priorities for available enhanced 911 funding are as follows:

- (1) To **assure that 911 dialing is operational** statewide;
- (2) To assist counties as necessary to assure that they can **achieve a basic service level for 911 operations**; and
- (3) To **assist counties as practicable to acquire items of a capital nature appropriate to modernize 911 systems and increase 911 effectiveness**.

RCW 38.52.545. The language “including an enhanced 911 emergency communications system” was added to the original language in RCW 82.14B.020(2), not to indicate that counties could spend the money on dispatching and other services, but in acknowledgment of the new ESInet and telephone equipment for future enhanced 911 features.

**There are currently insufficient funds collected by either the counties or the state to fully fund the equipment, personnel and network service necessary to accept and route incoming 911 calls. If counties use their excise tax funds to pay for dispatch and other services or equipment, there will**

be an even greater need for money to provide 911 equipment and personnel, without the necessary funds to meet the need.

The legislature intended the 911 excise tax revenue to be spent on incoming 911 calls and not on services for first responders. Although first responder services are also vital, such an interpretation would severely impact the counties' and state's ability to meet the first need--the ability to accept and route 911 calls to the appropriate PSAP.

Sincerely,

A handwritten signature in blue ink, appearing to read 'AW', followed by a horizontal line.

Adam Wasserman  
Washington State E911 Officer

cc: Dawn Cortez, Assistant Attorney General

## **ATTACHMENT 2**



**STATE OF WASHINGTON  
MILITARY DEPARTMENT  
EMERGENCY MANAGEMENT DIVISION**  
MS: TA-20 Building 20  
Camp Murray, Washington 98430-5122  
Phone: (253) 512-7000 · Fax (253) 512-7207

April 14, 2021

Tim Lenk  
Pierce County 911 Coordinator

RE: 911 Excise Tax Fund Use

Dear Mr. Lenk,

It has come to the attention of the State 911 Coordination Office that Pierce County is using proceeds from the county 911 excise tax to fund land mobile radio, namely in the Combined Communications Network project.

In accordance with RCWs 38.52.10, 38.52.500-577, 82.14B.020, 82.14B.030, 82.14B.050, and WACs 118-66-020, 118-66-040, 118-66-060, and as my letter to all county coordinators dated December 15, 2020 clearly articulated, this is not an appropriate use of the 911 excise tax. Although the state office does not have direct control over the county 911 excise tax, as the state coordinator and the office that manages all federal NG911 grant funding for the state, I am compelled to ensure that 911 fees are not being diverted or misused. This diversion of 911 fees could result in Pierce County and possibly the state missing out on significant federal grant opportunities if it is not rectified quickly. Further, it may result in an audit finding by the Washington State Auditor's Office (SAO). I have attached a management letter from September 2019 from the SOA to Pierce County regarding similar improper use of county 911 excise tax and the SOA's recommendation to work with my office to ensure use of the excise tax complies with state law.

I urge your attention to this matter to ensure the proper use of 911 excise tax in your county. As a key partner we are willing to assist you in seeking a way forward. Please let me know if you have any questions.

Thank you for your prompt attention to this matter.

Sincerely,

  
Adam Wasserman

Washington State E911 Coordinator

cc: Dawn Cortez, Assistant Attorney General  
Jody Ferguson, Director Pierce County Department of Emergency Management

# **ATTACHMENT 3**



# FY2019 Pierce County E911 Program Fund

Budget Line Item		2019 Actual	Description/Comments
2019 Beginning Fund Balance		3,540,000	Amount is from FY2018 CAFR
E911 Excise Tax Revenue		8,246,730	
<b>Total Resources</b>		<b>11,786,730</b>	
Expenditures:			
Cyber Security Project		258,585	Pilot at WSP; contract terminates 2/2020
Direct PSAP Support		126,750	Viper Phone Maintenance for Puyallup and WSP; Console Cleaning
Direct PSAP Support (CPD Grant)		58,466	Training; Telephone; Supplies
County Space Rental		86,460	Use of space at DEM for E911 Program Office Staff
Alert/Warning System		297,835	Supplies; Professional Services; Telephone; Utilities
Salaries/Benefits - Statewide Services		13,500	Assume costs for Communications Systems Manager (0.1 FTE)
Supplies/Services - Statewide Services		17,627	Supplies; Travel & Training
Salaries/Benefits - Public Education		95,338	Assume costs for Community Program Educator (1 FTE)
Supplies/Services - Public Education		1,174	Space Rental; Utilities
Salaries/Benefits - E911 Admin		245,114	4.10 FTEs Budgeted - Assume Admin Asst (eliminated in 2020) and Telecommunications Coordinator (2 FTEs)
Supplies/Services - E911 Admin		14,593	Supplies; Travel & Training; Telephone; Audit
E911 Admin - County Fees:			
Space Rental	1,490		
Self Insurance	5,530		
Medical Self Insurance	1,040		
Miscellaneous	379		
IT Enterprise Allocation	36,210		
IT Financial/HR Allocation	21,480		
IT Systems Support Allocation	376,160		
IT Systems New Investments	24,570		
Performance Audit	3,750		
Indirect Costs	101,320		
Routing	2,240		
Security	1,180		
Government Relations	2,160		
Central Public Records	1,220		
Cost Pool Allocations	350,914		DEM Cost Pool distributed between 5 DEM funds
<b>Total E911 Admin County Fees</b>		<b>929,643</b>	

FY2019 Pierce County E911 Program Fund

Budget Line Item		2019 Actual	Description/Comments
Transfers:			
\$0.20 to South Sound 911		2,397,587	
Distribution of \$0.50 to South Sound 911		1,900,649	
Distribution to CCN - Radio User Fees		1,150,220	
Transfer to Other Funds		700,000	
Total Expenditures/Transfers		8,293,541	
Total Fund Balance - December 31, 2019		3,493,189	



# FY2019 Pierce County E911 Program Fund

Budget Line Item		2019 Actual	Description/Comments
E911 Excise Tax Revenue		8,247,000	
Expenditures:			
Services		259,000	Cyber Security Pilot at WSP; contract terminates 2/2020
Direct PSAP Support		185,000	Viper Phone Maintenance; Training; Console Cleaning
Alert/Warning System		298,000	Supplies; Professional Services; Telephone; Utilities
Salaries/Benefits ( <i>See Staffing Summary</i> )		354,000	3.1 FTEs in 2019
Supplies/Services - Personnel		33,000	Supplies; Travel & Training
County Allocations/Indirect Costs:			
Facility Space	87,950		
IT Allocations	458,420		Enterprise, Financial, HR, Support Systems
DEM Cost Pool	350,910		Includes DEM administrative personnel, supplies and other departmental costs that are allocated to each of the five DEM funds
County Indirect Fees	101,320		
Insurance	6,950		
Performance Audit	3,750		
Central Public Records	1,220		
Government Relations	2,160		
Security	1,180		
Routing	2,240		
Total County Allocations:		1,016,000	
Transfers:			
Distribution to South Sound 911		4,298,000	52% of Excise Tax Revenue in 2019
Distribution to CCN - Radio User Fees		1,150,000	To Maintain Public Safety Rate at \$31.50
Transfer to Other Funds		700,000	Funding of Jail DAS Project
Total Expenditures/Transfers		8,293,000	
Total Fund Balance - December 31, 2019		3,857,000	

FY2019 Pierce County E911 Program Fund

Staffing Summary:	2019 Actual	2020 Budget
Communications System Manager	0.1	0.1
Community Program Educator	1.0	1.0
Emergency Management Coordinator	1.0	1.0
Telecommunications Coordinator	1.0	1.0
	3.1	3.1

# **ATTACHMENT 4**



**Office of the Washington State Auditor  
Pat McCarthy**

September 13, 2019

Councilmembers and Executive Dammeier  
Pierce County  
Tacoma, Washington

Management Letter

This letter includes a summary of specific matters that we identified in planning and performing our accountability audit of the Pierce County from January 1, 2017, through December 31, 2018. We believe our recommendations will assist you in improving the County's compliance in these areas.

We will review the status of these matters during our next audit. We have already discussed our comments with and made suggestions for improvements to County officials and personnel. If you have any further questions, please contact me at 253-593-2047 ext.128.

This letter is intended for the information and use of management and the governing body and is not suitable for any other purpose. However, this letter is a matter of public record and its distribution is not limited.

We would also like to take this opportunity to extend our appreciation to your staff for the cooperation and assistance given during the course of the audit.

Sincerely,

A handwritten signature in cursive script that reads "Joanne Klein".

Joanne Klein, Audit Manager

Attachment

Management Letter  
Pierce County  
January 1, 2017 through December 31, 2018

**Use of enhanced 911 excise tax**

State law (RCW 82.14B.030) gives counties authority to impose an enhanced 911 (E911) excise tax not to exceed \$0.70 a month for each switched access line to be used for an emergency services communication system. State regulation and law identify expenditures eligible for enhanced 911 excise tax funding in WAC 118-66-050, WAC 118-66-060 and RCW 82.14B.050.

State law (RCW 82.14B.020(2)) provides the following definition of emergency services communication system: “ ‘Emergency services communication system’ means a multicounty or countywide communications network, including an enhanced 911 emergency communications system, which provides rapid public access for coordinated dispatching of services, personnel, equipment, and facilities for police, fire, medical, or other emergency services.”

During fiscal years 2017 and 2018, the County received \$7,919,882 and \$8,409,434 in E911 excise tax revenues and spent \$8,794,224 and \$10,419,446, respectively. We identified \$410,000 in spending for purposes that did not meet the definition of an emergency services communication system for years reviewed, and therefore were unallowable. The County interpretation of allowable expenditures from E911 funds did not align with the interpretation of the State Enhanced 911 Coordinator’s Office.

We recommend County management work with the State Enhanced 911 Coordinator’s Office to ensure spending from the E911 excise tax complies with state law. We also recommend the County conduct additional legal review to determine if any further actions, such as repayment, are necessary.

# **ATTACHMENT 5**

**Strategic Study of 911 Dispatch Operations, Radio Systems, 911  
Funding and Governance for South Sound 911, Pierce County, and  
Public Safety Agencies in Pierce County, Washington**

**Final Report**

**February 2018**



**DELTAWRX**  
management consultants

**Strategic Study of 911 Dispatch Operations and Radio Communications Operations  
for  
South Sound 911, Pierce County, and Public Safety Agencies in Pierce County, Washington**

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## Executive Summary

DELTAWRX was engaged by South Sound 911 to assess three areas of interest to South Sound 911, Pierce County and the agencies serviced by South Sound 911: radio systems, dispatch operations, and the sustainability of South Sound 911. This report presents our findings and recommendations in each area.

To provide the requested assessment, DELTAWRX gathered, synthesized and analyzed financial and statistical information, reviewed documentation provided by the County and South Sound 911, conducted independent research, and interviewed members of the South Sound 911 Operations and Policy Boards, members of County departments including the Department of Emergency Management (DEM) and Department of Finance, representatives of municipal signatories to the Interlocal Agreement, South Sound 911 and the State of Washington E911 Office. We also spoke with Executive Directors from five Washington PSAPs to provide a benchmark of their PSAPs' governance models and operations.

Where asked to provide recommendations, DELTAWRX relied on four principles as a guide. First, we believe that technical and operational decisions should prioritize the safety of the public and the citizens. Second, public funds should be used wisely, efficiently, and for the purposes for which they were intended. We view agencies as the stewards of taxpayer funds and assets, not owners. As such, all stakeholders should participate in decisions about how to use public funds, regardless of the fiduciary agent. Third, organizational decisions should take into account best practices in multi-agency, public safety governance. Some of these best practices are: transparent communication; transparent financial reporting; formal and inclusive decision-making processes; and prioritizing the group as a whole over individual communities. Finally, recommendations should look to the future and not dwell on the past.

Part 1 of the report addresses issues around radio system operations. DELTAWRX was asked to evaluate the current business models of the radio systems serving public safety operations in Pierce County and provide options for policy leadership assuming a single-system approach. We recommend that the county transition to a true single-system radio infrastructure and suggest ways to reduce overall system operating and maintenance costs, including establishing a single organization responsible for the operation and management of radio services. We also recommend that, because of its financial interests in the system, South Sound 911 should play a role in the administration, operation and maintenance of any system supporting the county's public safety communications system. Table 1 summarizes our recommendations in this area by topic.

Table 1. Summary of Recommendations Regarding Radio System Operations

Section	Recommendations
1.1. Potential consolidation of services	1.1.1: Transition to a true single-system radio infrastructure
1.1 Reduction in operating and maintenance costs	1.1.2: Conduct a study to determine if it is more cost effective to outsource maintenance of the Fixed Network Equipment (FNE) and site equipment 1.1.3: Continue to fund Motorola Fixed Network Equipment (FNE) using the MSI SUA-II program
1.1 System Replacement Policies	1.1.4: Develop a comprehensive strategic capital replacement schedule/plan for all other (non-FNE) system and facilities components 1.1.5: Individual agencies should determine their own subscriber replacement policies
1.2 Organizational Roles	1.2.1: SS911 should play a key role in the administration, operation, and maintenance of any system supporting the county's public safety communications and, as such, should be a signatory to any agreement which relies on funding established by Proposition 1 or receives funds from the South Sound 911 organization 1.2.2: Designate/establish a single organization that is responsible for the operation and management of the radio system

Part 2 of the report addresses questions concerning dispatch operations. DELTAWRX was tasked with analyzing and providing recommendations on call routing, staffing and the proposed Municipal Emergency Operations Center (EOC) in the planned Public Safety Communications Center. Table 2 is a summary of our recommendations in each area.

Table 2. Summary of Recommendations Regarding Dispatch Operations

Section	Recommendations
2.1. Countywide call routing	2.1.1: Reexamine wireless call routing within Pierce County in an effort to reduce the number of calls transferred between PSAPs
2.2. Call handling practices	2.2.1: Transition to a unified call taker model 2.2.2: Develop and staff a formal QA program
2.3. Staffing	2.2.1: Adjust talk group assignments based on actual talk time data and the geographic proximity of users 2.2.2: Address dispatcher staffing once the county has standardized on a single radio system and adjusted talk group assignments 2.2.3: Conduct a top to bottom organizational study to more thoroughly assess staffing, including organizational structure, position descriptions and total staffing levels
2.4. Municipal EOC	2.4.1: Develop formal documentation clarifying the primary purpose of the EOC, any secondary purposes and other allowable activities

Part 3 of the report addresses areas around sustainability of funding and operations for public safety communications and South Sound 911. In Section 3.1 we present the results of our evaluation of the use and administration of the \$.70 E911 excise tax and an analysis of the current structure of the Pierce County E911 Office (E911 Office). We find that over the years evaluated, the County has not provided stakeholders with a clearly understandable accounting of the use of funds. Lack of transparency, inconsistent and confusing documentation and unilateral decision making has eroded trust and confidence in the County in general and the Department of Emergency Management in particular. Our recommendations, which are applicable to any entity managing the E911 funds, focus on creating an inclusive decision-making process for how to use funds and tying the expenditure of funds to documented policy and a strategic plan. See Table 3 for a complete list of the recommendations regarding the use and administration of the \$.70 E911 excise tax.

In Section 3.2, we discuss the relationship of South Sound 911 with the State of Washington E911 Office (State). Following the consolidation of PSAPs in Pierce County, South Sound 911 is the primary Public Safety Answering Point (PSAP) in Pierce County and the role of the County as a coordinator of county-wide E911 services is seen by the public safety agencies as an unnecessary level in the administration of E911 services when South Sound 911 could, like other consolidated PSAPs in the State, have a direct relationship with the State.

Section 3.3 explores potential benefits to moving the E911 Program Office responsibilities to South Sound 911. The County cites a holistic approach to emergency management and the presence of WSP and JBLM PSAPs in the county as benefits to housing the E911 Office within the DEM. Despite the possible benefits of locating the E911 Office responsibilities at the County, DELTAWRX finds that there are likely benefits, including improved accountability, collaboration, cost efficiencies and staffing efficiencies, to moving some or all E911 Office responsibilities to South Sound 911. Table 3 presents the recommendations for regarding moving E911 Program Office responsibilities to South Sound 911.

Section 3.4 summarizes our findings regarding the use of the 1/10 of 1% sales and use tax. Several agreements guide the expected use of the sales and use tax, including the Interlocal Agreement, which stipulates that any funds left over should be used to offset the cost of operations, which are covered by allocation fees paid by member and non-member agencies to which South Sound 911 provides communications services. We recommend that South Sound 911 continue to meet its contractual obligations and, in addition, develop a strategic plan for capital projects, technology investment, radio management and staffing. Table 3 summarizes of our recommendations regarding the use of sales and use tax revenues.

In section 3.5, we evaluate the governance structure of South Sound 911 and find that South Sound 911 has governance structure options. We discuss those options, review the current

governance structure of South Sound 911 in light of these options, and provide the results of benchmarking other Washington State PSAPs.

Table 3. Summary of Recommendations for Sustainability

Recommendations Regarding the Use and Administration of the \$.70 E911 Tax (Section 3.1)	Recommendations Regarding Moving E911 Office Responsibilities to South Sound 911 (Section 3.3)	Recommendations Regarding the Use of Excess Sales and Use Tax Revenues (Section 3.4)
<p>3.1.1: Identify a task force to seek State E911 Coordination Office clarification for allowable use of funds.</p> <p>3.1.2: Develop a formal and public policy regarding priorities for and use of Pierce County E911 excise tax funds.</p> <p>3.1.3: Develop a county-wide strategic plan for E911, including a plan for investment in NG911.</p> <p>3.1.4: Subject to agreed-upon priorities, consider using E911 excise tax revenue to offset the direct costs of providing E911 call intake and handling services before expending it for non-E911 purposes.</p> <p>3.1.5: Conform with reporting requirements in RCW 83.14B (030).</p> <p>3.1.6: Regardless of who is managing the E911 funds, reporting on expenditures needs to be clear, consistent between published reports, easy to understand, and on a regular schedule.</p>	<p>3.3.1: Engage in a facilitated decision-making process to determine whether some or all of the E911 Program Office responsibilities should be relocated to South Sound 911</p> <p>3.3.2: Establish a county-side governance structure for E911 program administration</p>	<p>3.3.1: South Sound 911 should continue to prioritize expenditures per its contractual obligations</p> <p>3.1.2: South Sound 911 should develop a strategic plan for capital projects, technology investments, radio management and staffing</p>

## Part 1 Radio Systems

DELTAWRX was asked to address two areas regarding Pierce County (County) radio operations. First, we were tasked with evaluating the current business models of the radio systems serving public safety operations in the county. In particular, we were asked to:

1. Identify and provide recommendations regarding the potential consolidation of services;
2. Identify and provide recommendations to reduce the overall operational and maintenance costs; and
3. Analyze the current system replacement policies and recommend a unified approach for the replacement of fixed network equipment and subscriber units.

Table 4. Summary of Recommendations Regarding Radio System Operations

Section	Recommendations
1.1. Potential consolidation of services	1.1.1: Transition to a true single-system radio infrastructure
1.1 Reduction in operating and maintenance costs	1.1.2: Conduct a study to determine if it is more cost effective to outsource maintenance of the Fixed Network Equipment (FNE) and site equipment 1.1.3: Continue to fund Motorola FNE using the MSI SUA-II program
1.1 System Replacement Policies	1.1.4: Develop a comprehensive strategic capital replacement schedule/plan for all other (non-FNE) system and facilities components 1.1.5: Individual agencies should determine their own subscriber replacement policies
1.2 Organizational Roles	1.2.1: SS911 should play a key role in the administration, operation, and maintenance of any system supporting the county's public safety communications and, as such, should be a signatory to any agreement which relies on funding established by Proposition 1 or receives funds from the South Sound 911 organization 1.2.2: Designate/establish a single organization that is responsible for the operation and management of the radio system

Second, DELTAWRX was asked to provide options for policy leadership assuming a single-system approach by evaluating the potential role of South Sound 911 as an administrator and/or operator of a combined radio system and evaluating the roles of the Combined

Communications Network (CCN) and the Tacoma Radio Shop, assuming a single-system or unified systems approach.

Table 4 summarizes our recommendations for each topic. In the sections below, we describe the current challenges inherent in each of these issues and explain the recommendations we make to address each.

## 1.1 Pierce County Public Safety Radio Systems Business Models

### Consolidation of Radio Networks

Public safety agencies within Pierce County operate on two totally separate Motorola ASTRO25 mission-critical voice infrastructures or systems. The two systems are loosely coupled together using a Motorola ISSI 8000 interoperability gateway enabling trunked resource sharing among the two systems. At the time of this study, the ISSI 8000 interface was configured only to allow trunked resources to be shared between dispatch radio consoles connected to their respective systems. No over-the-air resource sharing for users in the field was configured at the system level nor were the subscribers programmed to enable this type of functionality.<sup>1</sup>

Pierce County, in partnership with Pierce Transit, operates the Combined Communications Network (CCN). The CCN mission-critical voice sub-systems include a 700 MHz Phase II Project 25 multi-site simulcast voice network providing countywide coverage, a 4-channel 3-site VHF system to support operations in the 410 corridor, and a 4 channel 11-site VHF overlay to support fire station alerting, paging and mutual aid. Additionally, the system includes a UHF data network which provides wireless data services used exclusively by Pierce Transit.

The City of Tacoma operates an 800 MHz Phase II Project 25 multi-site simulcast voice network, which includes the RF infrastructure owned by the City of Puyallup. While the Tacoma system provides coverage outside of the City of Tacoma, the system was designed to support the agencies of their respective cities and thus has denser coverage, providing for better in-building performance within the Cities of Tacoma and Puyallup.

DELTAWRX evaluated the Pierce County public safety radio systems and found the following:

- The current environment provides no operational benefits
- The current two-system approach creates operational challenges

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<sup>1</sup> Pierce County subscribers are not programmed for Inter-WACN roaming, which is required for foreign access to a P-25 system through an ISSI interface.

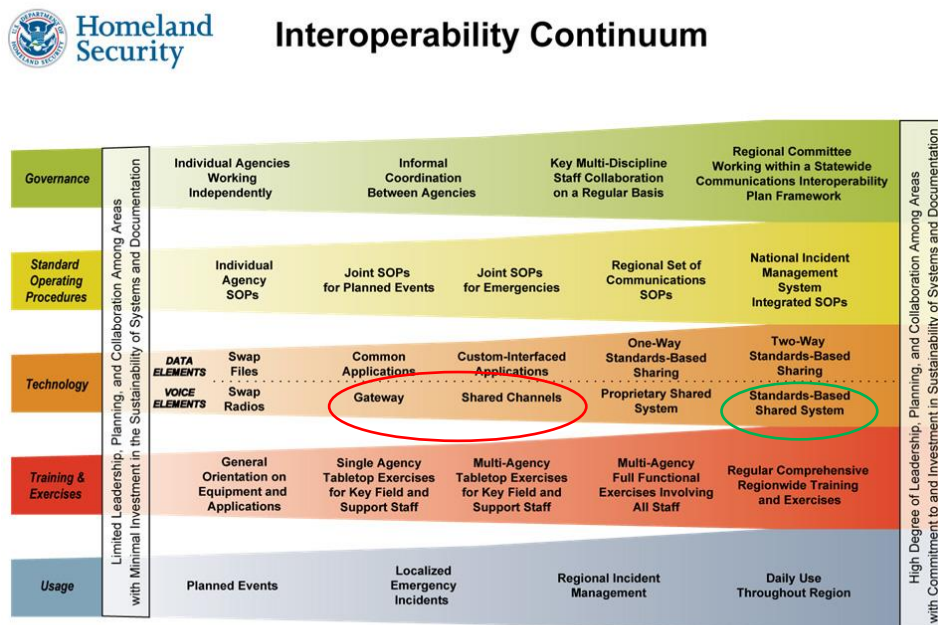
- The two-system configuration does not meet the intention of the enabling ballot initiative
- Operating two different systems creates unintended operational consequences
- Sharing of conventional resources requires the duplication of equipment and increases costs

To address these challenges, DELTAWRX recommends that the county transition to a true single-system radio infrastructure. The following paragraphs describe these challenges.

The current environment provides no operational benefits

Having public safety agencies operate on two separate systems provides no operational benefits. In fact, having two systems is contradictory to interoperability guidance published by the Department of Homeland Security's SAFECOM program (see Figure 1). The current state in Pierce County of using two separate systems is identified by the red oval showing that the county is using gateways and shared channels (channels from each system programmed into every radio). The desired state is represented by the green oval showing a single shared standards-based system for the entire County.

Figure 1. Department of Homeland Security SAFECOM Program Interoperability Continuum





### The current two-system approach creates operational challenges

Dispatch center managerial staff have specifically noted that sub-optimal operational decisions are made due to technical constraints imposed by having operations on two disparate systems. The SS911 communications center has two sets of radio consoles. One set is connected to the CCN system and the other is connected to the Tacoma system. The ISSI 8000 Interoperability Gateway interconnects both systems and allows trunked resources from one system to be accessed on any console if the gateway is operating. When the gateway is not operational, which is typically during scheduled maintenance periods, resources are only available on the console of the system on which those resources reside. Additionally, conventional resources, such as the VHF Overlay and VHF 410 cannot be shared across the gateway without creating patches to trunked resources. This requires dispatch positions to be segregated physically and logically by the system to which they are connected. As an example, agencies that may be geographically contiguous but operate on different systems cannot be assigned to the same talk group without creating a patch between the two systems. Rather, this requires RF resources on both systems. Migrating to a single system configuration would remove these constraints.

### The two-system configuration does not meet the intention of the enabling ballot initiative

The justification of Proposition 1, endorsed by the Pierce County Executive at the time, stated that “South Sound 911 will provide a seamless regional solution.” Maintaining two separate systems does not support the intentions of the ballot initiative as published. Elected officials in attendance during interviews and presentations were insistent that the current two-system environment was unacceptable moving forward. Pierce County representatives have stated that “truly interoperable services should be provided through a single consolidated system that is seamless, effective, efficient and accountable.”<sup>2</sup>

### Operating two different systems creates unintended operational consequences

The two systems are different in composition, configuration, coverage, and capacity. The Tacoma/Puyallup system is substantially smaller than the CCN system. The CCN system, with much larger coverage and capacity requirements, is substantially larger. Logically, a larger system costs more to maintain than a smaller system. This understandably results in a different cost per user to operate and maintain each system. Additionally, the systems operators have adopted different cost allocation models, taking different approaches to the calculation of the end-user per device costs. The differing cost models have created an unintended atmosphere of “competition” between the systems, and end-users may choose their system based on the cost per unit rather than on the coverage and capacity required to support their mission. Pierce

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<sup>2</sup> From document titled “Pierce County Comments on South Sound 911 Strategic Plan.”



County representatives have pointed out that having a “common service delivery will preclude unproductive and costly system competition.”<sup>3</sup>

Sharing of conventional resources requires the duplication of equipment and increases costs

The current two-system configuration does not allow of the sharing of convention resources such as the VHF Overlay, VHF 410 or other conventional interoperability resources through the ISSI gateway. While the sharing of conventional resources across system can be accomplished with the duplication of system-level hardware and additional connectivity, this approach creates additional one-time and recurring costs to establish and maintain.

#### Recommendation 1.1.1: Transition to a true single-system radio infrastructure

During the interviews and subsequent sessions, no technical barriers were presented or identified that would prevent combining the two existing systems into a single system. In fact, in the fall of 2015, South Sound 911 received a proposal from Motorola to reconfigure the two systems into a single system.<sup>4</sup>

As such, DELTAWRX recommends that executive representatives of the County, Pierce Transit, South Sound 911 and the City of Tacoma engage with Motorola Solutions to determine the most advantageous technical solution for combining the two existing communication systems to a single ASTRO25 system. The decision should include input from the technical staff supporting the CCN and the City of Tacoma, but ultimately the selection of the best approach should be weighted toward operational and financial benefits over technical concerns. Inputs to the decision should include a number of critical factors, including one-time reconfiguration costs, recurring operating and maintenance costs, operational requirements, technical limitations, service disruptions, time to implement and desired level of redundancy. It may be beneficial to the decision-making process to engage a neutral third-party to facilitate, assist and to provide technical subject matter expertise throughout the process.

Table 5 shows potentially viable technical solutions for the consolidation of the two systems, along with advantages and disadvantages of each. The configuration, which is ultimately chosen, should be a decision made during the recommended decision-making process.

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<sup>3</sup> Ibid.

<sup>4</sup> Motorola Solutions “Proposal for Single System with Dynamic System Resilience (DSR)” dated 10/16/2015.

Table 5. Advantages and Disadvantages of Viable System Consolidation Options

Configuration	Advantages	Disadvantages
Status Quo Two-system ISSI 8000 (Console resource sharing only)	<ul style="list-style-type: none"> <li>Allows system owners to retain control</li> </ul>	<ul style="list-style-type: none"> <li>Consoles are tied to only one specific system (700 or 800)</li> <li>Conventional resources must be duplicated (vs. shared) on each system</li> <li>Requires subscriber provisioning on both systems</li> <li>Software-based solution</li> <li>Requires console patches to share resources across systems</li> </ul>
Two-system ISSI 8000 (Console resource sharing with talk group roaming enabled)	<ul style="list-style-type: none"> <li>Allows system owners to retain control</li> <li>May allow talk group roaming based upon configuration</li> </ul>	<ul style="list-style-type: none"> <li>Consoles are tied only to one specific system (700 or 800)</li> <li>Conventional resources must be duplicated (vs. shared) on each system</li> <li>Requires subscriber provisioning on both systems</li> <li>Software-based solution</li> <li>Requires subscriber re-programming</li> </ul>
Single Zone non-DSR <sup>5</sup>	<ul style="list-style-type: none"> <li>Conventional resource sharing without duplication of hardware</li> <li>Reduced services costs (single Master Site)</li> <li>Single subscriber provisioning</li> </ul>	<ul style="list-style-type: none"> <li>Requires configuration of certain site links</li> <li>Requires subscriber re-programming</li> </ul>
Two Zone non-DSR (Inter-Zone Link)	<ul style="list-style-type: none"> <li>Conventional resource sharing without hardware duplication</li> <li>Least disruption to site link network connections</li> <li>Single subscriber provisioning</li> </ul>	<ul style="list-style-type: none"> <li>Requires maintenance/SUA-II investment for two Master Sites</li> <li>Requires subscriber re-programming</li> </ul>
Single-Zone DSR	<ul style="list-style-type: none"> <li>Conventional resource sharing without hardware duplication</li> <li>Likely most expensive re-configuration option</li> <li>Single subscriber provisioning</li> </ul>	<ul style="list-style-type: none"> <li>Likely most expensive re-configuration option</li> <li>May require substantial reconfiguration of site links</li> <li>Requires subscriber re-programming</li> </ul>

<sup>5</sup> Dynamic System Resiliency (geographically dispersed, tertiary zone controller)

## Reduction in Operating and Maintenance Costs

DELTAWRX was asked to identify and provide recommendations to reduce the overall operational and maintenance costs. Moving to a single system provides opportunities to reduce the overall recurring operational costs. Specifically, within the Cities of Tacoma and Puyallup, radio sites from both CCN and the Tacoma/Puyallup systems provide overlapping coverage. In certain cases, sites may be either co-located or within close proximity to each other. This creates the opportunity to evaluate coverage and capacity in those areas and make changes to the system configuration to eliminate, rebalance or relocate sites resulting in either lower recurring costs by eliminating excess channel capacity or duplicate sites, or less additional capital investment costs if a site or channels can be relocated to areas where additional coverage or capacity is required.

Other opportunities to reduce operational and maintenance costs can be found in the approaches to maintenance of the Fixed Network Equipment (FNE) and site equipment, funding of the Motorola SUA-II contracts, and the management structure responsible for the operation and management of the radio system. The following recommendations discuss these approaches.

**Recommendation 1.1.2: Conduct a study to determine if it is more cost effective to outsource maintenance of the Fixed Network Equipment (FNE) and site equipment**

DELTAWRX recommends that the system owner/operator(s) conduct a study to determine if it is more cost effective to outsource the maintenance of the system to include FNE, generators, HVAC, microwave, uninterruptible power systems, and other system components to third party maintainers for an annual fixed cost.

Many large system owners have determined that the outsourcing of radio system maintenance provides a number of advantages over self-maintaining. Some owner/operators outsource 100% of the system to a single service provider, who in turn executes sub-contracts with other providers for sub-system components, creating a turn-key service contract managed by a dedicated service manager and system technicians dedicated to the system operator. Others elect to execute and manage individual contracts with multiple vendors.

Service contract costs have a tendency to be highly negotiable in nature and due to the size of the combined systems, the owner/operator(s) may find themselves in a position to negotiate a long-term contract resulting in substantial savings for the taxpayer.

In addition to the direct costs, such as personnel, benefits, and overtime, there are a number of indirect costs savings which should be taken into consideration when considering the outsourcing system maintenance. Indirect costs savings may include vehicle acquisition and

depreciation, fuel for service vehicles, administrative cost allocations, technical training courses and travel.

The owners/operators have already outsourced certain system components and functions. The existing City of Puyallup RF infrastructure is currently outsourced to Motorola. Much of the non-FNE equipment such as microwave, HVAC, generator and UPS maintenance are already maintained by third parties. The CCN contracts with Motorola for a full-time on-site System Manager and both Tacoma and the CCN contract with Motorola for a number of services including security and networking monitoring, dispatch services, technical support, infrastructure repair and infrastructure response.

[Recommendation 1.1.3: Continue to fund Motorola Fixed Network Equipment \(FNE\) using the MSI SUA-II program](#)

Both system owner/operator(s) have elected to annually purchase Motorola's System Upgrade Agreement (SUA-II) coverage for their respective systems. DELTAWRX recommends that the owners/operator(s) continue the practice of funding the Motorola SUA-II contracts.

The System Upgrade Agreement provides the hardware, software, and services for regular system upgrades for all Fixed Network Equipment at a predictable cost. The SUA-II agreement covers all fixed network equipment. It does not cover end-user subscriber agreements or site equipment (e.g., antennas, generators, UPS, HVAC).

SUA-II agreements tend to be highly negotiable and the owner/operator may be positioned to negotiate a long-term agreement resulting in substantial savings for the taxpayers.

### [System Replacement Policies](#)

Currently, each operator has taken different approaches towards the replacement of non-FNE system and facility components. The CCN has created a system replacement reserve fund which it has the option of contributing to on an annual basis. The City of Tacoma includes some non-FNE upgrades/replacements as part of its multi-year capital plan. Additionally, South Sound 911 has invested in new subscriber units for all of the public safety agencies it serves in Pierce County.

DELTAWRX makes the following recommendations for approaches for the replacement of fixed network equipment and subscriber units.

Recommendation 1.1.4: Develop a comprehensive strategic capital replacement schedule/plan for all other (non-FNE) system and facilities components

DELTAWRX recommends that the owner/operator(s) develop a comprehensive strategic capital replacement program that, at a minimum, takes into consideration life-cycle, replacement schedule, and funding of all non-FNE system and facility components.

DELTAWRX recommends development of a detailed replacement schedule. The schedule should be based on an accurate inventory of the durable items comprising the system. The inventory should include all non-FNE equipment, systems, and facilities components (e.g., HVAC, generators, microwave, roofs, towers, antennae, enclosures). Each item should be assigned a practical useful life-cycle and a determination of action at the end of the life cycle (e.g., repair, replace, renovate), as well as an anticipated target replacement date and estimated cost.

Using the replacement schedule, a pre-determined annual capital investment amount can be calculated. This annual investment amount should be used to fund the normal end-of-life cycle replacements and repairs identified in the plan and to make debt-service payments on any bonded items.

Real property and other large expenditures, which exceed the budgeted and available pre-determined annual capital expenditure amount, should be considered candidates for long-term bonding/debt-service. The amount required for annual debt-service should be taken into consideration when calculating the annual pre-determined capital expenditure amount. The combination of debt-service and anticipated purchases should not exceed the pre-determined annual expenditure target.

An emergency capital replacement reserve fund should be established. The amount of available capital reserve fund should be sufficient to cover the replacement or loss of key critical system components that may from time-to-time fail or require replacement. The amount of funds held in the reserve fund should be reasonable and sufficient to cover unanticipated expenditures, but not excessive.

Recommendation 1.1.5: Individual agencies should determine their own subscriber unit replacement policies

DELTAWRX recommends that the individual user agencies should be allowed to determine their own replacement policies for end-user subscriber devices and that it is not within the purview of system operator to establish a blanket policy for user agencies.

Proposition 1 funds enabled the purchase and upgrade of the majority of end-user subscriber devices for many of the public safety agencies in Pierce County. The ILA states that “end user

subscriber units shall be owned by the Member Agencies that operate them, unless otherwise agreed to in writing.”<sup>6</sup> As stated in the ILA, end-user subscriber units were intended to be the property of the individual agencies and as such are agency property. Any replacement policy should be an agency-based decision.

The availability of funding will vary from agency-to-agency. Some agencies may be financially positioned to build cash replacement reserves on a regular basis. Others may opt to fund unit replacements from capital or grant funding. Any decision on a replacement policy should take into consideration:

- Funding mechanisms for replacement (e.g., operating, capital or grant funding)
- Useful life-cycle of the device based on the application
- Financial capabilities of the agency

Each of these areas of consideration are particular to each agency. The replacement policy should meet the needs and capabilities of the respective agency.

## 1.2 Options for Policy Leadership

DELTAWRX was asked to provide options for policy leadership, assuming Pierce County adopts a single-system approach to radio operations. In particular, we were tasked with evaluating the potential role of South Sound 911 as an administrator and/or operator of a combined radio system and the roles of the CCN and Tacoma radio shops.

Table 6. Financial Contributions to Operating and Maintaining Pierce County Radio Communications

Funding Source	% of CCN Operational Expenses	% of Tacoma Operational Expenses <sup>7</sup>
All Public Safety Agencies, including South Sound 911	66%	83%
Only South Sound 911	33%	26%

Currently, South Sound 911 has no formal or codified role in the governance of either the CCN or the City of Tacoma’s ASTRO25 systems, even though it serves as the primary financier of both capital investment and operational funding for the county’s mission-critical voice systems. CCN views South Sound 911 and the agencies it services as customers, not stakeholder, even though, through user fees, they comprise the largest user base and funding source for the

<sup>6</sup> 2014 South Sound 911 Amended and Restated ILA. Section 12.

<sup>7</sup> Fixed Network Equipment and Console Fees only. Excludes other services provided.

operation of both the CCN and City of Tacoma systems. Table 6 shows the percent of operational expenses supported by public safety funding, in general, and South Sound 911 specifically. South Sound 911 alone provides more than 25% of the funding.

Recommendation 1.2.1: SS911 should play a key role in the administration, operation, and maintenance of any system supporting the county's public safety communications and, as such, should be a signatory to any agreement which relies on funding established by Proposition 1 or receives funds from the South Sound 911 organization

As the largest provider of public safety communications in the County and a substantial provider of funding for both networks, South Sound 911 should play a formal and integral role in the governance of any system that is dependent on the organization for growth and sustainability.

In fact, based on the text of both the ballot initiative and the resulting Interlocal Agreement which established South Sound 911, it appears that it was the intention of the originating parties that South Sound 911 would play a critical role in the operations of the County's public safety communications systems, both operationally and financially.

Proposition 1 states that funding from the 1/10<sup>th</sup> of 1% sales tax be expended:

"...the purpose of providing funds for costs associated with financing, design, acquisition, construction, equipping, operating, maintaining, remodeling, repairing, reequipping, and improvement of emergency communication systems and facilities infrastructure."

The Interlocal Agreement establishing South Sound 911 as executed states:

"... [South Sound 911] shall be responsible for providing communications services pursuant to this Agreement either directly, or by contract or similar agreement or arrangement."

Recommendation 1.2.2: Designate/establish a single organization that is responsible for the operation and management of the radio system

DELTAWRX recommends that a single organization be designated or created for the operation and the management of the public safety mission-critical voice system utilized for the dispatch of the county's public safety agencies and that the Executive stakeholders begin a structured and facilitated process to determine the most advantageous and acceptable alternative.

As previously stated, there are two organizations which currently operate and maintain mission-critical voice communications systems in the county, the CCN and the City of Tacoma Radio Shop. In addition to the operational challenges created by operating on two separate

systems, having two management organizations creates additional logistical challenges for the end-users. From a financial perspective, having two organizations performing the same functions and services, may not be the most effective use of taxpayer funds. Pierce County representatives have stated “a single entity can provide common service delivery standards, staff consolidation, shared communication sites and common contracts.”<sup>8</sup> DELTAWRX concurs with and supports this position.

Table 7. Advantages and Challenges of Single Management Approaches

	CCN as Operator	SS911 as Operator	New Organizational Entity as Operator <sup>9</sup>
Advantages, Benefits and Opportunities	<ul style="list-style-type: none"> <li>Already established as a service provider</li> </ul>	<ul style="list-style-type: none"> <li>Largest user community (by operational funding) becomes operator</li> <li>Gives the user community some control over costs</li> </ul>	<ul style="list-style-type: none"> <li>Starts with clean slate</li> <li>Opportunities for improvement over current models</li> <li>Potential for more efficient delivery of services</li> <li>Potential for lowest cost allocation model</li> </ul>
Challenges	<ul style="list-style-type: none"> <li>Perceived lack of transparency among largest user community</li> <li>High user costs under current model, partially due to cost allocations models at PC and DEM</li> </ul>	<ul style="list-style-type: none"> <li>While in scope, no internal capabilities exist</li> <li>Lack of negotiations leverage with current owners as it is not currently a system owner/operator</li> </ul>	<ul style="list-style-type: none"> <li>High effort to establish</li> </ul>

The designation or creation of a single entity has the potential to reduce costs by eliminating the duplication of functions (e.g. management, supervisory, support, administration) that result from having multiple agencies maintaining their respective components of a combined system. The options for a single management organization include the City of Tacoma Radio Shop, the CCN, South Sound 911, or the creation of an entirely new organizational entity. While the City of Tacoma Radio Shop currently operates the City of Tacoma’s 800 MHz system, it is unlikely that the current organization could be positioned to scale up to operate such a large system. Table 7 outlines the high-level advantages, benefits, opportunities, and challenges of the other three approaches.

<sup>8</sup> From document titled “Pierce County Comments on South Sound 911 Strategic Plan.”

<sup>9</sup> Fixed Network Equipment and Console Fees only. Excludes other services provided.



The CCN, which currently operates the larger of the two systems, is already established as a service provider and is well-positioned to operate the combined system. If the county selects this approach, it would need to make substantial modifications to the governance model to include the addition of South Sound 911 as a signatory to the existing agreement. It would also need to address current challenges, including the perceived lack of transparency among the user community and its existing cost model that contributes to high user costs.

South Sound 911, while chartered in the ILA as *“responsible for providing communications services”* and as the representative of the largest user community (based on operational funding), has no internal capabilities within its current organization and may not have the necessary leverage to negotiate terms of transference with current owners.

A new organizational entity would entail significant effort to establish. However, the new entity could commence operations without the history of an existing entity. Starting from a clean slate would provide the opportunity to improve service delivery and, potentially, lower costs.

The county should consider other factors as it seeks to identify its single system management approach. Some of those factors include the level of effort to transition to the organization, potential resistance from outside and inside sources, the impacts on the existing organizations, overhead costs, and the ability to be able to incur debt service.

Regardless of the organization that is ultimately selected to be the system operator, Pierce County, Pierce Transit and the City of Tacoma will need to maintain some type of organic radio maintenance organization or contract with a third-party service provider to support their respective end-user communities. This in itself creates the opportunity for additional consolidation of services.

## Part 2 Dispatch Operations

DELTAWRX was tasked with analyzing the following aspects of dispatch operations as part of our Strategic Study:

1. The routing of emergency 911 calls within Pierce County, particularly as pertains to call transfers between South Sound 911 and the Washington State Patrol
2. Call handling practices, specific to internal operations at South Sound 911
3. Telecommunicator staffing at South Sound 911, including call taker staffing, dispatch staffing and talk group assignments
4. The presence of the Municipal Emergency Operations Center (EOC) in the planned Public Safety Communications Center (PSCC)

Table 8 summarizes our recommendations regarding each topic. In the sections below, we describe the current challenges inherent in each of these issues and explain the recommendations we make to address these challenges.

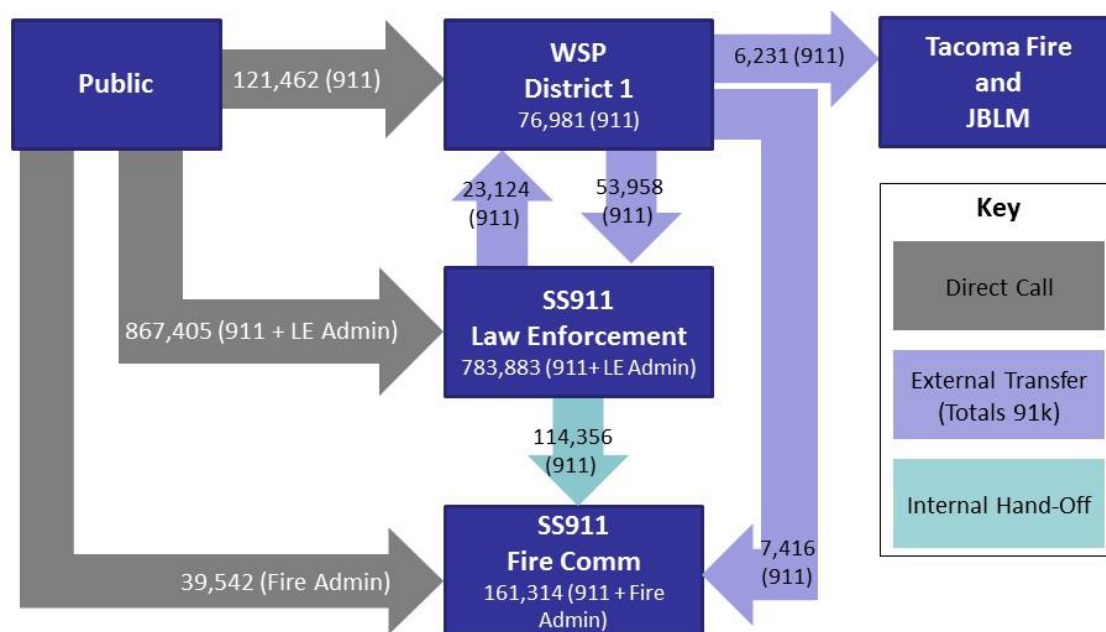
Table 8. Summary of Recommendations Regarding Dispatch Operations

Section	Recommendations
2.1. Countywide call routing	2.1.1. Reexamine wireless call routing within Pierce County in an effort to reduce the number of calls transferred between PSAPs
2.2. Call handling practices	2.2.1. Transition to a unified call taker model 2.2.2. Develop and staff a formal QA program
2.3. Staffing	2.3.1. Adjust talk group assignments based on actual talk time data and the geographic proximity of users 2.3.2. Address dispatcher staffing once the county has standardized on a single radio system and adjusted talk group assignments 2.3.3. Conduct a top to bottom organizational study to more thoroughly assess staffing, including organizational structure, position descriptions and total staffing levels
2.4. Municipal EOC	2.4.1: Develop formal documentation clarifying the primary purpose of the EOC, any secondary purposes and other allowable activities

## 2.1 Countywide Call Routing

Four Public Safety Answering Points (PSAPs) operate in Pierce County: Washington State Patrol-District 1 (WSP), South Sound 911 (including law enforcement and fire operations), Tacoma Fire and Joint Base Lewis-McChord (JBLM). The incoming call flow to these PSAPs, and the volume of calls that are transferred and handed off internally, are depicted in Figure 2. The statistics in Figure 2 are from 2016, with the exception of those attributed to WSP, which are from September 1, 2016 to August 31, 2017, the only period for which the State was able to provide call transfer data. The difference in reporting periods introduces a margin of error into our analysis, but, in general, we find that Washington State Patrol transfers roughly three times as many calls to South Sound 911 as it receives from South Sound 911 (53,958 to 23,124).

Figure 2. Incoming Call Flow (2016)



Discussions with project stakeholders yielded consensus that wireless calls placed in proximity to freeways frequently route to the Washington State Patrol, despite falling within the jurisdiction of a different PSAP.<sup>10</sup> These calls must therefore be transferred to the PSAP with jurisdictional authority. We are unable to determine the length of time that this transfer adds to the call processing timeline since the phone systems log calls as transferred from the moment that they land in the receiving PSAP's queue, not the time when they are actually answered by the receiving telecommunicator. Nevertheless, the need to transfer an incoming 911 call is unanimously understood to be a disadvantage both among project stakeholders and within the broader emergency communications industry given the delay to initiating dispatch

<sup>10</sup> Call sector routing information was unavailable for DELTAWRX to review.

services and the potential for the reporting party to be disconnected during the transfer process.

Compounding the concern regarding call transfers between Washington State Patrol and South Sound 911 is the fact that the State does not provide pre-arrival emergency medical instructions to the reporting party. In the current environment, only fire call takers at South Sound 911 are trained and qualified to provide this service. Their law enforcement counterparts do not have this certification. The importance of commencing pre-arrival instructions without delay, as a result of a call transfer or otherwise, is well illustrated by the case of cardiac arrest. Trained call-takers can provide a caller with instructions for performing cardiopulmonary resuscitation (CPR) by following emergency medical dispatching protocols. CPR must be initiated within 120 seconds of the onset of a cardiac arrest to provide the victim with the best chance of survival. In this case, the time spent transferring a call would consume seconds better spent instructing the caller how to provide medical aid.

#### [Recommendation 2.1.1: Reexamine wireless call routing](#)

South Sound 911, Washington State Patrol, and other PSAP stakeholders as desired, should reexamine wireless call routing within Pierce County in an effort to reduce the number of calls transferred between PSAPs. This should be part of a broader multi-jurisdictional effort to establish routine methods for reporting and analyzing call transfer data to establish baseline statistics and track call transfer progress and setbacks. This should occur immediately and continue during and post the County's transition to a Next Generation 911 call routing/ESInet II system, which is expected to significantly reduce the number of transfers required.

An analysis and reassignment of call sector routing should reduce the number of calls transferred within Pierce County, although in the absence of baseline documentation, we are unable to project future-state statistics. The establishment of a routine process to report on and analyze statistics will provide countywide stakeholders with the information necessary to make informed decisions, and thus improve outcomes over time.

As an alternative, DELTAWRX explored the possibility of designating Washington State Patrol as a secondary PSAP, thereby providing all callers with immediate access to pre-arrival emergency medical instructions via South Sound 911 (assuming South Sound 911 moves to a unified call taker position as described in the subsection pertaining to Call Handling Practices). This alternative was deemed inferior to the current PSAP structure because if Washington State Patrol were to become a secondary PSAP, it would receive roughly 83,000 calls for service for which it is responsible via transfer, assuming all calls went immediately to the appropriate PSAP. We prioritize the opportunity to reduce the number of call transfers over the advantages offered by immediate access to pre-arrival emergency medical instructions. We also understand that the County is considering certifying all PSAPs to provide pre-arrival emergency

medical instructions and believe that this is a positive step that should occur in tandem with our recommendations.

## 2.2 Call Handling Practices

South Sound 911 has taken a phased approach to consolidating and collocating legacy 911 center employees and duties, with the Law Enforcement Support Agency (LESA) joining in 2012, Fife Communications joining in 2014, Puyallup City Communications joining in 2016 and West Pierce Fire and Rescue's Fire Communications joining in 2017. While much standardization has occurred, South Sound 911's organizational structure and operating procedures reflect the patchwork of legacy 911 centers that now comprise a single agency. South Sound 911 management has sought to unify its people and practices in a methodical and measured fashion without abrupt change.

In the current environment, call takers perform either law enforcement or fire/medical responsibilities, but not both. Incoming calls are taken by a law enforcement call taker, and then handed off to a fire/medical aid call taker as necessary. This handoff delays the initiation of pre-arrival medical instructions, since only fire/medical aid call takers are trained and qualified to provide this service. As was described in the Countywide Call Routing section, time is off the essence when providing this service.

South Sound 911 provides quality assurance (QA) in an ad hoc manner, without a formal program with dedicated resources. This practice allows South Sound 911 to respond to problems and provide telecommunicators with intermittent guidance, but does not conform with industry accepted best practices.<sup>11</sup>

### Recommendation 2.2.1: Transition to a unified call taker model

South Sound 911 should develop a unified call taker position that is capable of performing both law enforcement and fire/medical aid functions. The unified call taker would be trained and certified to provide pre-arrival medical instructions. This position would replace the current bifurcated structure and offers two primary benefits. It would make operations more efficient by eliminating the handoff from law enforcement to fire/medical call-takers, while allowing prearrival instructions to be provided earlier in the call processing timeline. South Sound 911 may also derive benefits to staffing and scheduling by using a single pool of call-takers, however those advantages are not driving this recommendation and therefore have not been analyzed.

The transition to a unified call taker position requires careful planning, including the development of an Emergency Medical Dispatch (EMD) training plan, an EMD quality assurance

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<sup>11</sup> CALEA Standard 6.1.5; APCO Minimum Training Standards; NFPA 1221; ASTM Standard F 1560.

plan that is based on industry standards and a staffing plan. South Sound 911 might consider allowing call takers to opt out of the universal call taker role if they are unwilling or unable to meet EMD requirements. Furthermore, it might be appropriate to increase former law enforcement call takers' pay once they become certified in EMD if this is needed to achieve parity with the fire call takers who are already certified in this area.

#### Recommendation 2.2.2: Develop and staff a formal quality assurance (QA) program

The recommendation to establish a unified call taker position that is trained in EMD requires the establishment of a formal QA program as a matter of risk management and best practices. In fact, given the size and complexity of South Sound 911, DELTAWRX recommends developing a formal QA program even if it does not move to a unified call taker model. QA in emergency communications serves multiple stakeholders. A QA program provides a systematic way to offer feedback to staff, which improves their performance, and, in turn, improves the services provided to dispatched agencies, ultimately benefiting the general public. In addition, by establishing a history of quantitative call processing metrics, South Sound 911 is better equipped to conduct self-assessments and to respond to outside inquiries about its performance. Suggested guidelines for establishing a QA program is provided in Appendix A.

## 2.3 Telecommunicator Staffing and Talk Group Assignments

### Talk Group Assignments

Project stakeholders expressed concern about South Sound 911's radio talk group assignments, specifically regarding inequalities in the volume of radio traffic from channel to channel. DELTAWRX was unable to obtain statistics documenting the volume of radio traffic per talk group to verify this anecdotal concern. We did however analyze CAD events by dispatch group, using this information as an imperfect proxy for talk group usage among law enforcement agencies.<sup>12</sup> The results of our analysis are provided in An additional concern raised among project stakeholders is the geographic profile of the various talk groups, specifically, the proximity of a talk group's users to one another. To analyze this issue, DELTAWRX developed a simple map, shown in Figure 3, which roughly plots talk groups to their municipalities. Talk groups are color coded by radio system and map pins are numbered to correspond with the associated talk group. We find that, in general, talk groups represent geographic clusters. Two exceptions are Talk Group 9 (East PCSD/Roy/Edgewood/Eatonville), which forms a large triangle that nearly spans the county, and Talk Group 10, which consists of a geographic cluster in the northwest corner of the county and central/eastern outliers of Orting and Buckley.

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<sup>12</sup> We were unable to map the approximately 80,000 CAD events that were attributed to the "SS Supervisor area" in 2016, as opposed to their starting beat, which account for about 11% of annual CAD events.

Table 9. We find that the number of CAD events per talk group are generally consistent, with the exception of East PCSD/Roy/Edgewood/Eatonville, which has roughly double the CAD events of other talk groups, and the three relief channels, which have minimal, if any CAD, events.

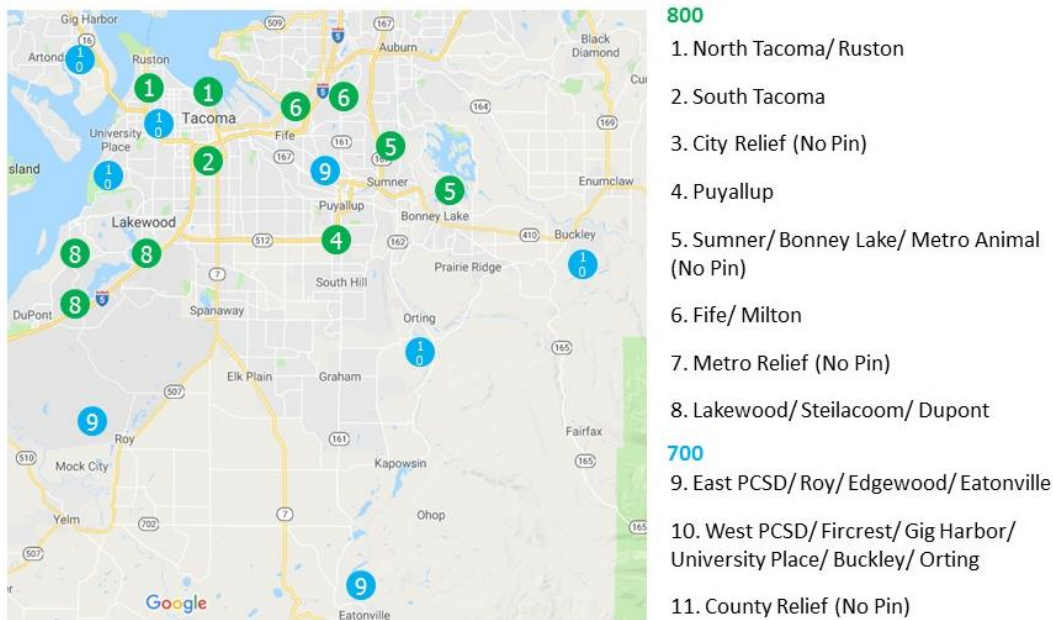
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Table 9. CAD Events by Dispatch Group (2016)

Primary Talk Group	CAD Events
1. North Tacoma/Ruston (City)	87,078
2. South Tacoma (City)	84,586
3. City Relief	10,095
4. Puyallup (Metro)	66,151
5. Sumner/Bonney Lake/Metro Animal (Metro)	38,076
6. Fife/Milton (Metro)	47,845
7. Metro Relief	0
8. Lakewood/Steilacoom/Dupont (County)	74,103
9. East PCSD/Roy/Edgewood/Eatonville (County)	157,387
10. West PCSD/Fircrest/Gig Harbor/UP/Buckley/Orting (County)	67,026
11. County Relief	2,647
<b>Total</b>	<b>634,994</b>



Figure 3. Law Enforcement Talk Group Geographic Profiles



Recommendation 2.3.1: Adjust talk group assignments based on talk time data and geographical proximity of users

As discussed in detail in the section of our report dedicated to Radio Systems, DELTAWRX recommends that public safety agencies within Pierce County standardize on a single radio system. Once this has occurred, we recommend that South Sound 911 adjust its talk group assignments based on actual talk time data and the geographic proximity of users. By focusing on operational needs, South Sound 911 will be more effective in facilitating and supporting emergency communications.

### Call Taker and Dispatcher Staffing

Current incoming call volume, CAD events and authorized staffing levels by discipline are provided in Table 10. This table excludes communications support officers, telephone report writers, analysts, operations supervisor and management staff, which are outside the scope of the Strategic Study.

Interviews with South Sound 911 employees did not unearth major concerns with current authorized staffing levels, primarily due to the broad understanding that South Sound 911 has not yet reached a steady state of operations and that much remains in flux as a result of the consolidation. Nevertheless, there is a desire among management to understand how current staffing compares with industry norms and best practices.



Table 10. South Sound 911 Call and Staffing Statistics (2016)

	Law	Fire/ Medical Aid	Total
Annual Incoming Calls (911 & Admin)	921,363	161,314	1,082,677
Annual CAD Events (CFS)	718,751	88,288	807,039
Authorized Communications Supervisors	9	5	14
Authorized Call Takers	33	N/A	33
Authorized Dispatchers	62	20	82
Total Authorized Floor Staff	104	25	129

Recommendation 2.3.2: Conduct a comprehensive organizational study to assess staffing, including organizational structure and position descriptions

DELTAWRX used available data to estimate optimal call taker staffing. We determined that, under a unified call taking model, the optimal number of call takers would be 33 and the number of Communication Service Officers would be 10 (9 for law enforcement operations and 1 for fire/medical call taking). Appendix B describes the process for arriving at these recommended staffing levels.

As South Sound 911 nears the end of its transition to a single, county-wide dispatch center and is approaches a cycle of relative stability, it is in a position to assess current operations, identify operational, administrative and technical support staffing needs, and determine the most efficient staffing strategy to meet those needs. For these reasons, we recommend South Sound 911 consider a top to bottom organizational study to more thoroughly assess staffing, including organizational structure, position descriptions training and total staffing levels.

Recommendation 2.3.3: Assess dispatch staffing after standardizing on a single radio system and adjusting talk group assignments

Determining the optimal number of dispatchers depends on a number of factors, including the target number of CAD events per dispatcher per hour, the number of units for which a dispatcher is responsible, minimum staffing per position and the number of talk groups available. As such, DELTAWRX recommends that South Sound 911 address dispatcher staffing once the county has first, standardized on a single radio system as discussed in the Radio Systems section of this report, and second, adjusted talk group assignments. These two actions are prerequisites for making a meaningful adjustment to dispatcher staffing.

## 2.4 Municipal Emergency Operations Center (EOC)

The decision to include an EOC in the future public safety facility can be traced back to a compromise reached to ensure the City of Tacoma's participation in the dispatch consolidation. Some plans have been made to account for the square footage requirements of the EOC, however no other decisions have been made regarding the use, maintenance and ownership of the center, creating unease among project stakeholders. Furthermore, while referred to as a municipal space, it appears that the EOC will be predominantly used by the City of Tacoma. We base this assumption on the square footage requirements in the IXP Facility Planning Study, which do not seem designed to support multiple communities simultaneously. In addition, given that the PSCC will be located in Tacoma, it would be rare for communities to be in a position to travel across towns to use the EOC when a disaster strikes.

Capital costs for the future PSCC will come first from Proposition 1 funds, which are "solely for the purpose of providing funds for costs associated with financing, design, acquisition, construction, equipping, operating, maintaining, remodeling, repairing, reequipping, and improvement of emergency communication systems and facilities infrastructure," as stated in the Explanatory Statement of Proposition 1: Sales and Use Tax for Improvements to Pierce County's 911 Emergency Communications System. There is concern among project stakeholders that the EOC, and potentially other functions to be housed in the PSCC (e.g., Records), may not be an appropriate use of Proposition 1 funds. DELTAWRX cannot offer a legal opinion on this matter, but is impartial to the collocation of an EOC and emergency communications center from an operational perspective.

**Recommendation 2.4.1:** Develop formal documentation clarifying the primary purpose of the EOC, any secondary purposes and other allowable activities

South Sound 911 should obtain a legal opinion on the authority to spend revenue from Proposition 1 on the full range of services intended to be housed in the PSCC, including the EOC. Assuming the EOC is deemed an appropriate use of funds, a multi-agency task force should develop formal documentation to clarify the primary purpose of the center, secondary purpose and other allowable activities. Furthermore, the documentation should set forth expectations regarding usage, ownership, maintenance responsibilities, cost-sharing (if appropriate) and the path to renegotiate the agreed upon terms. With more clearly defined documentation in place, there is less potential for miscommunication and barriers to the development of the EOC.

## Part 3 Sustainable Funding

DELTAWRX was tasked with assessing issues pertaining to the use and administration of the \$.70 E911 excise tax, the 1/10 of 1% sales and use tax for emergency communications, and the structure of South Sound 911 as an Interlocal Agency. Specifically, we were asked to:

1. Evaluate the use and administration of the \$.70 E911 excise tax collected by Pierce County
  - a. Analyze the current structure of the Pierce County E911 Program Office (E911 Office) and provide recommendations for the administration of funding and for reporting requirements
  - b. Evaluate the role of South Sound 911, as the provider of regional dispatch operations, with the State of Washington E911 Office
  - c. Evaluate moving the E911 Office, including Next Generation 911 (NG911) responsibilities, to South Sound 911
2. Provide recommendations for the use of excess money from the Pierce County 1/10 of 1% sales and use tax for emergency communications
3. Evaluate the structure of South Sound 911 as an Interlocal Agency and provide information regarding other governance models

Table 11 summarizes the recommendations we make in each section of this report. We address the first request in Sections 3.1 through 3.3. In Section 3.1 we present the results of our evaluation of the use and administration of the excise tax and analysis of the current structure of the E911 Office. Our recommendations, which are applicable to any entity managing the E911 funds, focus on creating an inclusive decision-making process for how to use funds and tying the expenditure of funds to documented policy and a strategic plan.

In Section 3.2 we discuss the relationship of South Sound with the State of Washington E911 Office, and in Section 3.3 we describe benefits to moving the E911 Program Office responsibilities to South Sound 911. As such, we recommend that the county engage in a facilitated decision-making process to determine whether some or all of the E911 Program Office responsibilities should be relocated to South Sound 911. We further recommend that, regardless of the location of the E911 Program Office, the county stakeholders should work together to establish a county-side governance structure for E911 program administration.

Table 11. Summary of Recommendations for Sustainability

Recommendations Regarding the Use and Administration of the \$.70 E911 Tax (Section 3.1)	Recommendations Regarding Moving E911 Office Responsibilities to South Sound 911 (Section 3.3)	Recommendations Regarding the Use of Excess Sales and Use Tax Revenues (Section 3.4)
<p>3.1.1: Identify a task force to seek State E911 Coordination Office clarification for allowable use of funds.</p> <p>3.1.2: Develop a formal and public policy regarding priorities for and use of Pierce County E911 excise tax funds.</p> <p>3.1.3: Develop a county-wide strategic plan for E911, including a plan for investment in NG911.</p> <p>3.1.4: Subject to agreed-upon priorities, consider using E911 excise tax revenue to offset the direct costs of providing E911 call intake and handling services before expending it for non-E911 purposes.</p> <p>3.1.5: Conform with reporting requirements in RCW 83.14B (030).</p> <p>3.1.6: Regardless of who is managing the E911 funds, reporting on expenditures needs to be clear, consistent between published reports, easy to understand, and on a regular schedule.</p>	<p>3.3.1: Engage in a facilitated decision-making process to determine whether some or all of the E911 Program Office responsibilities should be relocated to South Sound 911</p> <p>3.3.2: Establish a county-side governance structure for E911 program administration</p>	<p>3.3.1: South Sound 911 should continue to prioritize expenditures per its contractual obligations</p> <p>3.1.2: South Sound 911 should develop a strategic plan for capital projects, technology investments, radio management and staffing</p>

We address the second request in Section 3.4, where we summarize our findings regarding the use of the sales and use tax. We recommend that South Sound 911 continue to meet its contractual obligations and, in addition, develop a strategic plan for capital projects, technology investment, radio management and staffing.

Section 3.5 addresses the third request. In this section, we discuss governance options, review the current governance structure of South Sound 911 in light of these options, and provide the results of benchmarking other Washington State PSAPs.

### 3.1 Use and Administration of the \$.70 E911 Excise Tax

The analysis in Appendix C represents our understanding of the County's use of the E911 excise tax funds at the time of this report. Table 12 summarizes our findings and recommendations, details of which are provided in the following subsections. We find that over the years evaluated, the County has not provided stakeholders with a clearly understandable accounting of the use of funds. Lack of transparency, inconsistent and confusing documentation and unilateral decision making has eroded trust and confidence in the County in general and the Department of Emergency Management in particular. Our recommendations, which are applicable to any entity managing the E911 funds, focus on creating an inclusive decision-making process for how to use funds and tying the expenditure of funds to documented policy and a strategic plan.

Table 12. Summary of Findings and Recommendations Regarding Administration of Pierce County E911 Excise Tax Fund

Findings	Recommendations
<ul style="list-style-type: none"> <li>Understanding the County's use of the E911 Tax funds is challenging.</li> <li>County reporting on the use of E911 excise tax funds lacks consistency and clarity.</li> <li>Decision-making regarding how the E911 funds are used lacks transparency, input and accountability.</li> <li>Opinions differ regarding allowable uses of the E911 excise tax revenues.</li> <li>E911 excise tax funds are being expended for purposes other than the direct intake and handling of E911 landline, cellular and VoIP calls.</li> <li>Budgeted expenses from the E911 Excise Tax fund exceed expected revenues.</li> <li>The E911 Program Office appears to have disproportionately high indirect cost allocation within the Department of Emergency Management.</li> <li>Capital outlays from the E911 Excise Tax fund are for investments in the radio system infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>3.1.1: Identify a task force to seek State E911 Coordination Office clarification for allowable use of funds.</li> <li>3.1.2: Develop a formal and public policy regarding priorities for and use of Pierce County E911 excise tax funds.</li> <li>3.1.3: Develop a county-wide strategic plan for E911, including a plan for investment in NG911.</li> <li>3.1.4: Subject to agreed-upon priorities, consider using E911 excise tax revenue to offset the direct costs of providing E911 call intake and handling services before expending it for non-E911 purposes.</li> <li>3.1.5: Conform with reporting requirements in RCW 84.14B (030).</li> <li>3.1.6: Regardless of who is managing the E911 funds, reporting on expenditures needs to be clear, consistent between published reports, easy to understand, and on a regular schedule.</li> </ul>

#### Administration of the \$.70 Excise Tax – Findings

Understanding the County's use of the E911 Tax funds is challenging

Evaluating the use and administration of the E911 Excise Tax requires understanding how the funds are allocated to different expense categories. The Pierce County Department of

Emergency Management (DEM) manages the E911 Excise Tax Revenue Fund along with four other funds: Emergency Management, Emergency Management Grants, Combined Communications Network (CCN), and Radio Communications. Members of the Operations and Policy Board and signatories to the Interlocal Agreement, with the exception of Pierce County, and South Sound 911 have struggled with understanding how the County expends the E911 Excise Tax revenues. They expressed frustration at what they perceived as a lack of transparency and accountability by the Pierce County E911 Office (E911 Office) regarding the use of the \$.70 Excise Tax collected by the Washington State Department of Revenue and distributed to the Pierce County treasury. The agency representatives also expressed concerns about expenditures from the E911 Excise Tax revenues. As a result, over time trust in the County as stewards of the funds has diminished, as has the County's credibility with the other stakeholders.

DELTAWRX found that understanding the County's use of the E911 Excise Tax fund did require lengthy and careful investigation of County accounting information, including hours of meticulous review of documentation and tracking of expenditures in various County funds. Specific challenges we encountered in conducting this analysis included:

- Information presented in different ways in different documents; totals and spending categories varied between documents and it was difficult to understand the source of the variation
- Difficulty tracking fund transfers between funds managed by the DEM and by CCN; transfers in or transfers out of one fund are reflected in the corresponding fund either as a different amount, or not at all
- Disaggregating broad accounting categories; information regarding details was not readily available or apparent and required an iterative process of asking increasingly more pointed follow-up questions to clarify details

#### County reporting on the use of E911 excise tax funds lacks consistency and clarity

Per RCW 82.14B.030D, the County must provide an annual update to the State E911 Coordinator detailing the portion of their county E911 excise tax that is being spent on efforts to modernize their existing E911 communications system and E911 operational costs.

It is our understanding that the County does not provide the State with any documented updates detailing efforts to modernize existing 911 communications system and the State imposes no requirements on the County to do so. The County does provide the State with a high level annual report about how the County uses the E911 excise tax money. A copy of the report on 2016 expenditures is in Appendix E. DELTAWRX was unable to map the expenses on the report to the expenses County's E911 Fund budget and it may be that the report includes

spending by PSAPs as well as by the County. When we asked for help from the County we were told that the report was a “reflective concept as opposed to a line-by-line budget.”

As previously discussed, the County’s use of the E911 excise tax funds are not well documented. The County provides PSAPs including South Sound 911 and its Operations and Policy Boards an annual briefing on the E911 fund budget. The briefing is high-level and inconsistent with other published financial information, and the high-level accounting categories make it difficult to decipher the specific use of funds within the expense categories.

Decision-making regarding how the E911 funds are used lacks transparency, input and accountability

Priorities for use of E911 excise tax funds are determined solely by the DEM without input from the providers of E911 services and the DEM was unable to provide any detailed or comprehensive documentation providing a clear explanation of how it makes decisions regarding the use the funds.

Additionally, spending is not clearly aligned with any strategic initiatives at either the County or the DEM levels. The DEM Strategic Plan mentions E911 only once and does not identify any strategic initiatives for spending E911 funds.

Further, decisions are not validated or ratified by any external entity; DEM independently determines how to use the E911 funds.

Opinions differ regarding allowable uses of the E911 excise tax revenues

DELTAWRX found differing opinions on allowable uses of the E911 excise tax revenues. The County interprets the RCW such that the E911 excise tax funds can be used for any part of the County’s communications system, including radio, citizen alerting and emergency operations. The DEM views all parts as connected and necessary for providing public safety services. Documented DEM expenditures from the E911 reflect this interpretation. Expenditures in the professional services category include contracts for radio and citizen alerting; expenditures on central service allocations from the DEM E911 fund support the County’s emergency operations center; and E911 Program Office staff dedicate time to emergency management functions.

Interviewed members of the South Sound 911 Operations and Policy Boards believe that the funds from the E911 excise tax should be used for E911 purposes only.

In fact, the County’s interpretation contradicts its own expectations from South Sound 911. Section A.2 of the County’s PSAP Participation Agreement with South Sound 911 covering the distribution of E911 excise tax funds to South Sound 911 in 2015 and 2016, as well as the proposed 2017 Agreement, reads:



“The funds provided by the County as described in the Budget attached as Exhibit "B", shall be used by the PSAP solely for eligible expenses as described in WAC 118-66-050 (1) through (3) and WAC 118-66-060 that are necessary to operate E911 countywide.”<sup>13</sup>

Executive Directors from all of the benchmarked PSAPs believe that county E911 tax funds should be used only for the enhanced 911 emergency communications system and all have a clear demarcation between funds for radio operations and funds for call taking operations in their budgets.

In its 2017 Annual Legislative Update,<sup>14</sup> the State Enhanced 911 Advisory Committee to the State E911 Coordination Office (SECO) noted a number of State “E911 fund appropriations by the Legislature to other than E911 purposes,” including:

- Replacing a computer aided dispatch system for the Washington State Patrol
- Radio system upgrades for the Department of Corrections
- Installing a Mobile Office Platform for Washington State Patrol
- Funding a CPR cellular pilot project

The report states that “excise taxes are intended for system development, maintenance, current operating requirements and to modernize the 911 network and PSAP customer premise equipment (CPE). The funds are allocated to ensure the state 911 emergency public safety communications system is capable of processing data and voice technology statewide. State statute RCW 38.52.540 was a mandate by the Legislature that assured all monies from 911 excise taxes be used only to support the 911 system.”

As mandated by the New and Emerging Technologies 911 Improvement Act of 2008 (NET 911 Act), the FCC reports on the collection and distribution of 911 fees and charges by the states, the District of Columbia, U.S. territories and tribal authorities. Included in the report is an identification of states that used E911 funds to support non-911 related public safety programs. In the most recent report, which is for 2015, the FCC found that eight states, including

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<sup>13</sup> The Washington Administrative Code (WAC) 118-66 lays out allowable uses of the state E911 excise tax of \$.25. Appendix D lists the allowable expenses per WAC 118-66, all of which are for expenses related to the enhanced emergency management system, including PSAP costs for answering E911 calls. Radio and emergency management expenses are not listed as E911 expenses.

<sup>14</sup>

[http://app.leg.wa.gov/ReportsToTheLegislature/Home/GetPDF?fileName=2017%20Legislative%20Report%20Final\\_542f249c-a805-43d5-a8dd-380073a9002f.pdf](http://app.leg.wa.gov/ReportsToTheLegislature/Home/GetPDF?fileName=2017%20Legislative%20Report%20Final_542f249c-a805-43d5-a8dd-380073a9002f.pdf)



Washington, diverted or transferred E911 fees for purposes other than E911.<sup>15</sup> The report states that

“With respect to funds devoted to other public safety uses, we have generally determined that funds used to support public safety radio systems, including maintenance, upgrades, and new system acquisitions, are not 911-related within the meaning of the NET911 Act and therefore constitute a diversion of 911 funds.”

The report does point out, however, that in its response to the FCC’s request for information on E911 fund expenditures, Washington wrote: that the state’s

“Revised Code of Washington (RCW) and the Washington Administrative Code (WAC) when taken as a whole create a de facto line between ‘Call-taking’ and ‘Dispatch’” and that “state 911 dedicated funds are to be used only in support of call-taking functions (said differently, to get the 911 call from the call-maker to the call-taker) whereas “County 911 dedicated funds” are allowed to support specific “dispatching” functions.”

E911 excise tax funds are being expended for purposes other than the direct intake and handling of E911 landline, cellular and VoIP calls

Table 13. E911 Excise Tax Funds Used for Call-Taking Purposes

	2016 Actual	2017 Budget	2018 Budget
Distributions to SS911	\$4,101,170	\$4,000,000	\$4,185,840
Utilities	29,760	29,760	29,760
Equipment	13,560	-	-
Maintenance and Repair	15,900	15,900	15,900
Training	15,000	15,000	15,000
WSP/JBLM Support	323,130	167,600	133,240
Cyber Security Consultant	195,000	210,600	200,000
E911 Salaries	357,977	466,890	472,430
<b>Direct E911 Expense Total</b>	<b>\$5,051,597</b>	<b>\$4,905,750</b>	<b>\$5,052,170</b>
Total E911 Fund Expenditures	\$9,141,322	\$8,920,640	\$10,429,840
<b>E911 % of Expenditures</b>	<b>55%</b>	<b>56%</b>	<b>49%</b>

<sup>15</sup> [https://transition.fcc.gov/pshs/911/Net%20911/Net911\\_Act\\_8thReport\\_to\\_Congress\\_123016.pdf](https://transition.fcc.gov/pshs/911/Net%20911/Net911_Act_8thReport_to_Congress_123016.pdf)

Table 13 shows E911 fund expenses that the DEM attributes directly to supporting Pierce County PSAP call taking functions as a percent of total E911 fund expenditures.

In 2018, about 49% of the 2018 budgeted expenditures are for E911 purposes; the remaining 51% go toward county overhead, radio system support (including for the jail), and support for County emergency management operations unrelated to E911 operations.

Budgeted expenses from the E911 Excise Tax fund exceed expected revenues

Fund balances grow in years when expenditures fall short of the authorized budget. In years when budgeted expenditures exceed revenues, the difference is covered by the surplus accumulated in previous years. Table 14 shows a summary of the total available E911 funds and expenditures or budgeted expenditures for each year.

Table 14. Summary of Available E911 Funds and Expenditures and Fund Balances

Cost Category	2016 Actual	2017 Budget	2018 Budget
Beginning Fund Balance	\$6,919,000	\$5,785,454	\$4,200,000
Excise Tax Revenues	7,914,571	7,922,150	8,205,370
Grant Revenue and Miscellaneous Revenue	93,205	77,290	80,290
<b>Total Available E911 Funds</b>	<b>\$14,926,776</b>	<b>\$13,784,894</b>	<b>\$12,485,660</b>
Expenditures	9,141,322	8,920,640	10,429,840
Use of Fund Balance	\$1,226,751	\$834,170	\$2,144,180
<b>Ending Funding Balance</b>	<b>\$5,785,484</b>	<b>\$4,864,800</b>	<b>\$2,055,820</b>

In 2016, with a beginning fund balance of almost \$7 million, total available E911 funds were almost \$15 million. Expenditures that year exceeded tax revenues, and DEM used the reserves in the fund balance to cover the \$1.2 million difference, leaving a fund balance of \$5.8 million and \$13.7 million in available funds for 2017.

In 2017, expenditures are again expected to exceed tax revenue, this year by about \$1 million, leaving a fund balance of \$4,864,600 at the beginning of 2018.

The reported budget assumes the fund will start 2018 with a balance of \$4.2 million, about \$665,000 shy of the projected 2017 ending fund balance. With estimated expenditures over \$2 million higher than expected revenues in 2018, the fund balance will be close to \$2 million by the end of next year.

The E911 Program Office appears to have disproportionately high indirect cost allocation within the Department of Emergency Management

A portion of the County's administrative and IT costs (central services costs) are allocated to each County department and unit based on formulas for each allocated cost category. Additionally, since funding for the FTEs for higher level administration of the various DEM divisions comes out of the Emergency Management fund, a portion of the costs from that fund are allocated to the other four funds that the DEM manages (cost pool allocations).

Central service and DEM cost pool allocation costs are projected to be over \$1.1 million in 2018. At \$705,000, the central service allocation to the E911 Excise Tax fund is the highest of the five DEM funds and, although DEM assigns the fewest number of FTEs to the E911 Program Office, the DEM cost pool allocation is second highest. Examples of costs that stood out are:

- The charge for space rental, which will be over \$7,000 per month in 2018, for 4.1 FTEs
- The total costs for IT support, which are budgeted to be around \$475,000 for 2017 and 2018
- Indirect County-wide costs, which will be over \$100,000 in 2018
- The DEM cost pool allocation, which will be over \$415,000 in 2018

As explained in Appendix C, central services and DEM cost pool allocations are based on factors other than FTEs associated with a fund. The DEM uses E911 excise tax revenue to support the County's emergency management operations, including the EOC. The space occupied by the EOC, as well as the IT costs attributed to supporting the hardware, equipment and software associated with emergency management operations, both factor into the indirect cost allocation. Additionally, County accounting practices for central service allocations and the DEM cost pool allocation are weighted toward the revenue that passes through funds. The DEM cost pool allocation, as well as certain central service allocations, including the County-wide indirect costs, reflect the high revenue from the E911 Excise Tax compared to the revenue in the other DEM funds, especially relative to the number of FTEs in the E911 Program Office.

Capital outlays from the E911 Excise Tax fund are for investments in the radio system infrastructure

Capital outlays from 2016 through 2018 include almost \$2.5 million for the Pierce County Corrections Bureau radio systems improvement project. Additionally, \$3 million is budgeted for transfer to the Radio Communications fund to pay for the 700 and 410 overlay projects. Detail provided by the County for the E911 Excise Tax fund shows a \$1,540,960 transfer to CCN to

offset radio user fees in 2016. The CCN budget shows this transfer in from Pierce County, but shows it going into a replacement reserve fund, not offsetting radio user fees. The E911 Excise Tax fund does not show any budgeted transfers to CCN in 2017 or 2018, but the CCN budget shows revenue sourced from the “Pierce County E-911 \$.50 excise tax” in each of those years in the amount of \$1,085,490 and \$1,230,100, respectively. If these transfers do occur, the use of fund balance may be higher than projected.

### Use of E911 Excise Tax Funds – Recommendations

Recommendation 3.1.1: Identify a task force to seek State E911 Coordination Office clarification for allowable use of funds

DELTAWRX recommends a participatory and inclusive approach to developing priorities for the use of Pierce County E911 excise tax funds. Before coming to a county-wide agreement regarding the use of E911 excise tax funds, the county stakeholders need to have a clear understanding of what options are available. Joint participation in the process will create a shared understanding of allowable uses of the county’s E911 excise tax revenues.

As such, DELTAWRX recommends identifying a task force or committee to seek clarification for appropriate use of funds. The clarification process should include seeking input from SECO, but the task force might decide upon additional avenues for developing a shared understanding of allowable uses of the excise tax revenues. Participants in the process should include representation from the PSAPs, public safety agencies, and the County Executive office.

Recommendation 3.1.2: Develop a formal and public policy regarding priorities for and use of Pierce County E911 excise tax funds

Available excise tax funds are finite and the budget process is a means to allocate the funds. The Recommended Budget Practices from the National Advisory on State and Local Budgeting (NACSLB) published by the Government Finance Officers Association (GFOA) notes that the purpose of the budget process is to “help decision makers make informed choices about the provision of services and capital assets and to promote stakeholder participation in the process.”<sup>16</sup> As such, GFOA recommends that governments incorporate the following NACSLB practices into its budgeting process.

- Incorporates a long-term perspective
- Establishes linkages to broad organizational goals
- Focuses budget decisions on results and outcomes

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<sup>16</sup> <http://www.gfoa.org/recommended-budget-practices-national-advisory-council-state-and-local-budgeting>

- Involves and promotes effective communication with stakeholders
- Provides incentives to government management and employees

Developing a policy regarding priorities for the use of the county E911 excise tax funds, along with a strategic plan (see Recommendation 3) can provide that long-term perspective and organizational goals with which to link funding, and will guide the allocation of the funds during the budget process. The policy should take into account the shared understanding of allowable uses of the E911 funds and, to provide transparency into the budgeting process, be publicly available. We suggest that participants in the development of the policy include county PSAP Executive Directors, members of the South Sound 911 Policy Board and the County Executive or designee and that they obtain input from county stakeholders in the use of E911 funds. Possible stakeholders include representatives from public safety agencies, secondary PSAPs and citizens.

Recommendation 3.1.3: Develop a county-wide strategic plan for E911, including a plan for investment in NG911

A strategic plan offers a longer-term perspective and stability regarding expectations for the use of funds. It eliminates year-to-year and ad hoc decisions regarding the use of the tax monies and by tying the expenditure of funds to strategic goals, the custodian of the funds will have clear guidance for how to spend the money. A strategic plan will provide a framework measuring progress toward achieving strategic goals, and will afford a means for holding the custodian of the funds accountable to spending the money according to the agreed upon strategic direction.

The strategic planning process should involve PSAP Executive Directors, the County Executive or designee, a representative from SECO, and county stakeholders in the use of E911 funds; possible stakeholders include public safety agencies, secondary PSAPs, and citizens. To provide a long-term perspective, the strategic plan should cover a minimum of five years and include statements articulating the vision for E911 communications, the vision for the E911 Program Office and principles that will guide investment decisions. While strategic initiatives and priorities should be stable and aligned with the formal policy regarding the use of the funds, the strategic plan should be reviewed and updated annually to reflect changes in fiscal constraints, technology and resource availability.

Recommendation 3.1.4: Subject to agreed-upon priorities, consider using E911 excise tax revenue to offset the direct costs of providing E911 call intake and handling services before expending it for non-E911 purposes

Depending on the shared understanding of allowable uses of the E911 funds and the agreed-upon priorities for the expenditure of the funds, the stakeholders should explore benefits to the

county as a whole from using E911 excise tax revenue to offset the costs of providing E911 functions before spending on non-E911 functions such as County emergency operations or the radio system. Even allowing for investing a percentage of the funds in infrastructure and equipment for JBLM and WSP and directing the existing levels of capital investment into NG911 infrastructure projects, the potential exists for South Sound 911 to lower the cost to agencies of receiving call taking services by several million dollars annually. The Sheriff's Office alone could potentially save almost the same amount that the County is investing in the radio system for the jail.

Additionally, the County could be available for FCC grants to assist with the deployment of NG9-1-1 services; using the excise tax funds for anything the FCC considers a diversion of funds can compromise the County's ability to qualify for grant funding.

Finally, clear and direct linkages between revenue sources and expenditures can assist with the deployment and alignment of resources. For example, grants are available to assist state and local governments with emergency preparedness. If the County, or other municipalities, finds it lacks the resources to achieve its emergency preparedness goals, it can strategically direct resources toward attaining the grant funding. If the need is masked by a diversion of funds from one account to another, the County might be missing an opportunity.

Recommendation 3.1.5: Conform with reporting requirements in RCW 82.14B (030)

DELTAWRX recommends that the custodian of the E911 excise revenues conform with the requirements in RCW 82.14B (030) and report on the portion of their county E911 excise task that is being spent on efforts to modernize their existing E911 communications system and on E911 operational costs by developing standardized reporting documents characterizing expenditures on these efforts. Even though the State does not require Pierce County to provide the reports, such documentation will be a way to record county-side efforts and maintain a historical record of expenditures on E911 communications systems. Such reporting is not only required by state statute, but will also foster trust in the custodian of the funds by providing clarity and transparency as to how E911 funds are being spent.

Recommendation 3.1.6: Regardless of who is managing the E911 funds, reporting on expenditures needs to be clear, consistent between published reports, easy to understand, and produced on a regular schedule

The GFOA points out that financial reports presented in conformity with generally accepted accounting principles can be confusing and encourages state and local governments to provide "popular" easy-to-understand reports.<sup>17</sup> Numbers changing among reports creates confusion and diminishes credibility, while transparency in accounting practices and use of funds

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<sup>17</sup> <http://www.gfoa.org/popular-reporting-financial-information>

increases trust. Regardless of who is managing the E911 funds, reporting on expenditures needs to be clear, consistent between published reports, easy to understand, and on a regular schedule. Details of expense categories should be readily available and not masked by broad titles. Transfers to and from other departments, agencies or funds should detail where the transfers are going to and coming from, specify what they are being used for, and be reflected in the same terms in the financial records from both departments, agencies or funds. Pass-through money (e.g., money that goes to South Sound 911 and is returned in a different form) should be identified as such. Finally, if numbers on one financial document are different from numbers on another document, the reason should be clearly stated in the most recent document.

The County interprets the Revised Code of Washington (RCW) as allowing E911 Excise Tax funds to be used for any part of the County's communications system, including radio, citizen alerting and emergency operations. The DEM views all parts as connected and necessary for providing public safety services. Representatives of other agencies in the County interpret the statute more literally and believe the funds should only be used for E911 purposes, meaning everything necessary to route a call to the appropriate PSAP.

### 3.2 Role of South Sound 911 with the State of Washington E911 Office

DELTAWRX was asked to evaluate the role of South Sound 911 with the State of Washington E911 Office. Currently, South Sound 911 does not have a direct, formal relationship with the State of Washington E911 Office.

Following the consolidation of PSAPs in Pierce County, South Sound 911 is now the primary PSAP in Pierce County and the role of the County as a coordinator of county-wide E911 services is seen by the public safety agencies as an unnecessary level in the administration of E911 services when South Sound 911 could, like other consolidated PSAPs in the State, have a direct relationship with the State.

*South Sound 911 is the primary provider of 911 services in Pierce County*

For all practical purposes, South Sound 911 is the primary provider of call taking services to all of Pierce County. As a result of initiatives to consolidate the provision of public safety call taking and dispatching services, Sound 911 is the primary provider of county-wide E911 services. The Washington State Patrol receives cell phone calls placed from the county highways and freeways, albeit the majority of those calls should have been originally routed to South Sound 911. As a primary PSAP, it is eligible to benefit from the Pierce County E911 excise tax, although it is primarily funded from State-level funds. The JBLM, which is primarily funded from federal-level funds, is also considered a primary PSAP since it receives calls from within



the boundaries of the military base. From the perspective of SECO, however, JBLM is considered a dispatch center.

Most County E911 Coordinators in Washington are associated with the county's primary PSAP

RCW 38.52.520 established the State E911 Coordination Office (SECO), which is responsible for coordinating and facilitating the implementation and operation of enhanced 911 emergency communications systems throughout the state. Each county has a designated E911 Coordinator that is a liaison to the state.

The majority of counties in Washington have one PSAP servicing the entire county, and at least two span multiple counties. With few exceptions, the County E911 Coordinators in these counties are associated with the county's primary PSAP, most commonly as director or deputy director of the PSAP. Other associations include communications manager, sworn sheriff's personnel overseeing a communications center under the sheriff's office, division manager, GIS operator and 911 operator. In four of these counties, Columbia, Island, Pacific, and San Juan County, the Emergency Management Director is the county's E911 coordinator and in two of these counties, Island and San Juan, emergency communications are the responsibility of law enforcement agencies.

South Sound 911 could have a direct relationship with the state

According to its Annual Briefing on the Pierce County E911 Program Budget, the Pierce County E911 Program Office performs the following functions:

- Coordination between State and PSAPs
- Attend State E911 Advisory Committee meetings
- Represent Association of Counties West
- Serve on various state level committees
- Manage maintenance contracts with PSAPs
- Coordinate changes/repairs for PSAPs
- Project management
- Vendor coordination
- Coordinate carriers for call routing
- NG911 geolocation data validation and re-addressing
- Maintain MSAG
- Address validation
- Prepare and submit reports required in the RCW
- Administer State Coordinator Professional Development Grant
- Facilitate monthly PSAP meeting
- Ensure standards compliance
- Public education



It is not clear that the County management of all of these functions adds value to the management of E911 services in Pierce County, especially given the overhead cost associated with locating the E911 Program Office at the County. South Sound 911 coordinates county-wide call handling on an operational level with WSP and JBLM, and could leverage the relationships to coordinate county-wide investments in E911 infrastructure, including managing any county-wide 911-related maintenance contracts. South Sound 911 currently manages its own maintenance contracts, so the capability for managing contracts already resides in the organization. Further, it is unclear why South Sound 911, as the largest provider of Pierce County 911 services, would not be able to represent Pierce County E911 interests on the various state and regional committees and associations, and why it would need to be represented by a third party.

Concerning the GIS functions, it is our understanding that those are performed by a GIS Specialist located in the County's IT Department, not the GIS Specialist in the E911 Office. The GIS Specialist located in the County's IT Department is the GIS liaison to the State E911 Office and is responsible for maintaining the county GIS data.

The GIS Specialist in the E911 office, according to the DEM, "is responsible for ensuring the monthly updates to the citizen alert and warning system data bases, training partners, including the City of Tacoma and the City of Lakewood, to name a few, in the use of Pierce County Warning Alert Response Network." It is the GIS Analyst at South Sound 911 who maintains the GIS data for the 911 (call handling) and Computer Aided Dispatch applications and forwards location and GIS updates to the County for updates to the County GIS data system.

South Sound 911 has the resources and skills to provide public education regarding the use of E911. South Sound 911 is the county-wide provider of 911 services. As it is uniquely familiar with 911 issues pertaining to the provision of 911 services in the county, it can tailor the programs to best benefit the communities it services. Further, South Sound 911 already provides community 911 education (call takers provide the education in addition to their regular duties). The DEM Community Program Coordinator responsible for public education provides information on 911-related issues to other emergency management public educators, who then incorporate 911 education into their presentations on an all-hazards preparedness model. If DEM wants to incorporate information about 911 services into its emergency management programs, it could coordinate with South Sound 911 to provide the information.

### 3.3 Moving E911 Office Responsibilities to South Sound 911

Based on our evaluation of the role of South Sound 911 vis-à-vis the State of Washington E911 office, we do not find anything that precludes Pierce County from adopting a model in which South Sound 911, which is the primary provider of call taking services in Pierce County, houses the E911 Coordinator and represents the county's E911 interests.

Additionally, we do not find anything, nor were we provided with any information that would show otherwise, that precludes Pierce County from transferring responsibility for managing the E911 funds to South Sound 911. Counties levying the E911 excise tax enter into a contract with the Washington Department of Revenue (DOR) for the administration and collection of the tax. In Pierce County, the County Executive is authorized to negotiate and enter into the contract with the DOR. Per state statute, DOR must deposit taxes it collects on behalf of the county into the County treasury. DELTAWRX benchmarked four of the counties with an E911 Coordinator and in each county, the County Treasurer provided the funds to the E911 coordinator to expend per a budget agreed upon by its board of directors, or equivalent.

The County cites a holistic approach to emergency management and the presence of WSP and JBLM PSAPs in the county as benefits to housing the E911 Office within the DEM. As discussed in the following paragraphs, DELTAWRX finds that there are potential benefits, including improved accountability, collaboration, cost efficiencies and staffing efficiencies, to moving some or all E911 Office responsibilities to South Sound 911. As such, we recommend that the county engage in a facilitated decision-making process to determine whether some or all of the E911 Program Office responsibilities should be relocated to South Sound 911. We further recommend that, regardless of the location of the E911 Program Office, the county stakeholders work together to establish a county-side governance structure for E911 program administration.

Table 15. Summary of Findings and Recommendations Regarding the Location of E911 Program Office Responsibilities

Benefits to Locating the E911 Program Office Responsibilities at South Sound	Recommendations
<ul style="list-style-type: none"> <li>▪ Locating the E911 Program Office at South Sound 911 may provide for more accountability in the expenditure of the E911 excise tax funds.</li> <li>▪ Locating the E911 Program Office at South Sound 911 might improve collaboration in decision-making for the use of the E911 Excise Tax funds.</li> <li>▪ Locating the E911 Program Office at South Sound 911 may result in a more efficient use of taxpayer funds</li> <li>▪ Locating the E911 Program Office at South Sound 911 may result in a more efficient staffing to fulfill E911 responsibilities</li> </ul>	<p>3.3.1: Engage in a facilitated decision-making process to determine whether some or all of the E911 Program Office responsibilities should be relocated to South Sound 911</p> <p>3.3.2: Establish a county-side governance structure for E911 program administration</p>

Table 15 summarizes the benefits to locating the E911 Program Office responsibilities at South Sound 911, as well as our our recommendations, details of which are provided in the following subsections.

## Benefits to Moving E911 Program Office Responsibilities to South Sound 911

Locating the E911 Program Office at South Sound 911 may provide for more accountability in the expenditure of the E911 excise tax funds

Currently, accountability for expenditure of E911 excise tax funds resides with the County's DEM. Two boards manage South Sound 911, and the South Sound 911 Executive Director is accountable to both boards, which oversee or have input into the budget. The Policy Board consists of elected officials accountable to the taxpayers, and the Operations Board consists of appointed officials representing the county's public safety agencies. The County would not forfeit complete control of the funds since it has representation on both boards. Pierce County Council, the Pierce County Executive and the Sheriff are on the Policy Board and the Operations Chief of the Pierce County Sheriff's Department is on the Operations Board.

Locating the E911 Program Office at South Sound 911 may improve collaboration in decision-making for the use of the E911 Excise Tax funds

As discussed in the previous section, DEM unilaterally makes decisions regarding the use of the E911 funds. The structure at South Sound 911 is conducive to collaborative decision-making given the broad stakeholder representation on its Policy and Operations Boards.

Locating the E911 Program Office at South Sound 911 may result in a more efficient use of taxpayer funds

Currently, \$1.2 million goes toward central services and DEM cost pool allocations. The amount could be reduced if money were not being used to fund emergency management operations and staff were streamlined. However, since County accounting practices for calculating overhead allocations are weighted toward the revenue that passes through funds, overhead would still be higher than if the County Treasurer allocated the funds directly to South Sound 911 since no portion of the funds would be supporting the overhead associated with the DEM management of the funds.

Locating the E911 Program Office at South Sound 911 may result in a more efficient staffing to fulfill E911 responsibilities

In addition to supporting a portion of the Emergency Management division through cost allocation, the E911 fund supports 4.1 FTEs:

- MSAG Coordinator
- GIS Specialist
- Community Program Coordinator
- Telecommunications Coordinator

- Communications System Manager (.1FTE)

Figure 4. Pierce County E911 Program Office Structure

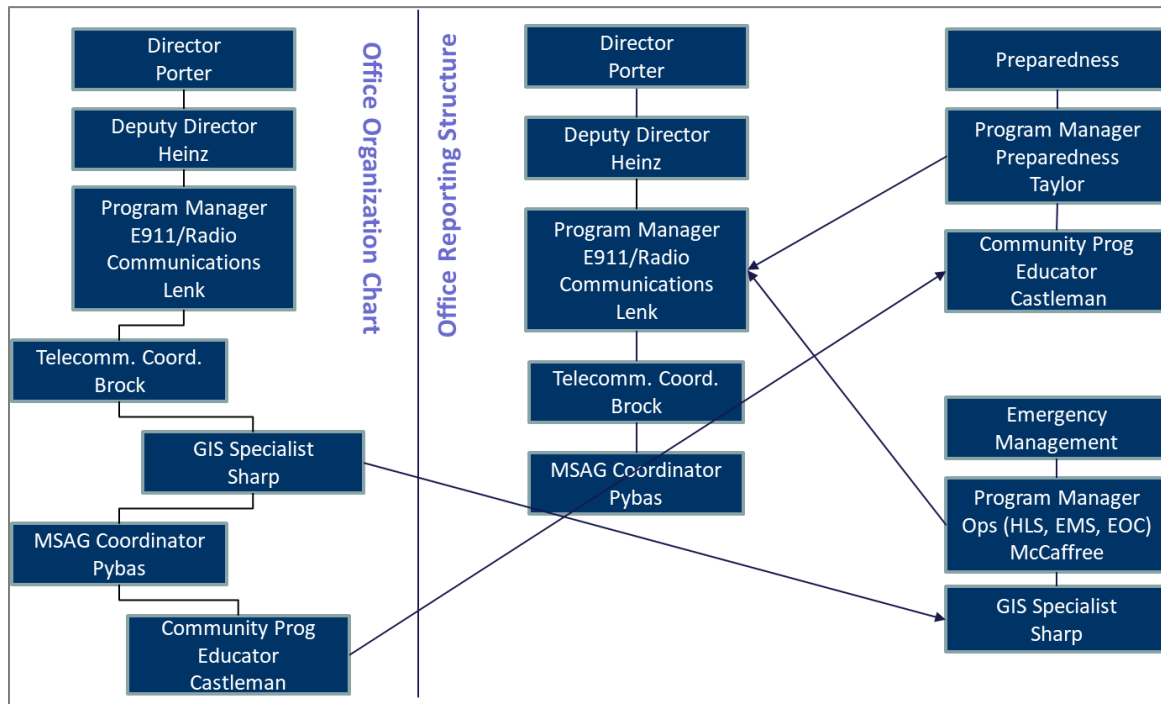


Figure 4 shows the E911 Program Office Structure as of December 2017, as provided by the DEM. Within the E911 Program Office, The MSAG Coordinator and the Telecommunications Coordinator Report to the Communications System Manager, who dedicates .1 FTE equivalent to the E911 division. The GIS Coordinator reports to the Operations Program Manager within the Emergency Management division and the Community Program Coordinator reports to the Preparedness Program Manager, also within the Emergency management division. While the Telecommunications Coordinator appears to be dedicated 100% to performing functions related to E911, the extent to which the other members for the department were dedicated to performing E911 functions is not readily apparent.

Specific details about these job descriptions were not available. In response to DELTAWRX requests for information regarding the job responsibilities of each position, DEM provided the generic County job descriptions, which, according to the County's website, are not intended to be a job description for specific positions.<sup>18</sup> The following paragraphs describe what DELTAWRX was able to learn about each position and its role in supporting E911 functions.

**GIS Specialist.** Per the job description, the GIS specialist is responsible for assisting a department in the development and implementation of a GIS database. In April, 2016, DEM

<sup>18</sup> <https://www.co.pierce.wa.us/1224/Job-Descriptions>

provided responses to questions that arose during an earlier presentation of the E911 Program Budget, including a question regarding the role of the GIS specialist and whether this person was an employee of IT or DEM. The response, which made no mention of E911 functions, read:

“This is a DEM employee who is responsible for ensuring the monthly updates to the citizen alert and warning system data bases, training partners, including the City of Tacoma and the City of Lakewood, to name a few, in the use of Pierce County Warning Alert Response Network.”

As part of the County’s contract with SECO, it must report the name and contact information of both an MSAG and GIS Coordinator. The reported GIS Coordinator is not the Program Office’s GIS Specialist, but rather a GIS Specialist who works in the County’s IT Department.

**MSAG Coordinator.** In our experience, the responsibility for MSAG updates is typically an additional duty and does require an assigned FTE. It may be a full-time job in Pierce County, but DELTAWRX was unable to ascertain the specific responsibilities of the MSAG Coordinator as they pertain to the E911 Program from the information provided.

**Community Program Coordinator.** The Outreach Section of the DEM’s Preparedness Division includes public education. This Community Program Coordinator provides information on 9-1-1-related issues to other public educators, who then incorporate 9-1-1 education into their presentations on an all-hazards preparedness model.

### Recommendations Regarding Moving E911 Office Responsibilities to South Sound

Recommendation 3.3.1: Engage in a facilitated decision-making process to determine whether E911 Program Office responsibilities should be relocated to South Sound 911

Although the ultimate decision for the location of the E911 Office resides with the County Executive, DELTAWRX suggests convening a county-wide committee consisting of executive level decision makers to engage in a facilitated decision-making process to determine whether some or all of the E911 Program Office responsibilities should be relocated to South Sound 911. Stakeholder participation not only creates buy-in for the decision, but also increases the likelihood that a broad range of factors, including the County’s approach to holistic emergency management, will be considered, assessed and discussed. Engaging a neutral facilitator can focus the decision-making on key factors and remove the impact of historical relationships among the stakeholders.

Recommendation 3.3.2: Establish a county-wide governance structure for E911 program administration

Regardless of the location of the E911 Program Office, the county stakeholders should work together to establish a county-side governance structure for E911 program administration. A governance structure, along with the strategic plan, reduces uncertainty, creates a venue for participatory decision-making and mitigates the risk of developing side agreements for alternative uses of the funds. The governance structure should establish a collaborative and inclusive decision-making structure, establish consistent uses of E911 funds that do not change from year to year, and include a mechanism to reprioritize the use of the funds to accommodate changes in technology, operations, and community needs and expectations.

### 3.4 Use of Pierce County 1/10 of 1% Sales and Use Tax

Appendix F shows the 2018 budget for South Sound 911 communications operations. The budget in Appendix F does not include revenue or expenses for supporting the records management services that South Sound 911 provides. Table 16 summarizes our findings and recommendations, which are described in detail in the following sections. Several agreements guide the expected use of the sales and use tax, including the Interlocal Agreement, which stipulates that any funds left over should be used to offset the cost of operations, which are covered by allocation fees paid by member and non-member agencies to which South Sound 911 provides communications services. We recommend that South Sound 911 continue to meet its contractual obligations and, in addition, develop a strategic plan for capital projects, technology investment, radio management and staffing.

Table 16. Summary of Findings and Recommendations Regarding Use of Excess Sales and Use Tax Revenues

Findings	Recommendations
<ul style="list-style-type: none"><li>Several agreements guide the expected use of the 1/10 of 1% sales and use tax</li><li>"Excess" revenue from the sales and use tax is offsetting allocation revenues</li></ul>	<p>4.4.1: South Sound 911 should continue to prioritize expenditures per its contractual obligations</p> <p>4.4.2: South Sound 911 should develop a strategic plan for capital projects, technology investments, radio management and staffing</p>

#### Use of Pierce County 1/10 of 1% Sales and Use Tax - Findings

Several agreements guide the expected use of the sales and use tax

Several agreements guide the expected use of the sales and use tax:

- County Resolution R2011-87: The resolution states that the sales and use tax will fund “needed improvements in the public safety communications systems, including public safety answering point (PSAP) facilities and radio system infrastructure, requiring updating and new technologies to meet future demands”
- Proposition 1: The proposition states that the sales and use tax will provide “funds for costs associated with financing, design, acquisition, construction, equipping, operating, maintaining, remodeling, repairing, reequipping, and improvement of emergency communication systems and facilities infrastructure”
- Interlocal Agreement (ILA) forming South Sound 911: The ILA states that “all of the sales and use tax collected by the County under the authority of RCW 82.14.420 shall be distributed to the Agency and specifically and exclusively allocated for the purposes of construction, Agency operations and maintaining Agency facilities including debt service on bonds issued for such purposes”

South Sound 911 is required to use the sales and use tax to pay off debt service and for capital investments necessary to provide the infrastructure for the delivery of public safety communications services. Per the ILA, any funds left over should be used to offset the cost of operations, which are covered by allocation fees paid by member and non-member agencies to which South Sound 911 provides communications services.

Table 17 shows the 2018 contractual obligations for the use of the sales and use tax revenue. After paying for its debt and capital investments, South Sound 911 has just over \$3.5 million to offset member and non-member allocation fees. Any reduction in debt or capital investments, thus increasing the amount of excess sales tax revenue, should be used to reduce member and non-member allocation fees.

Table 17. 2018 Budget for Use of Sales and Use Tax Revenue

Category	Amount
<b>Sales and Use Tax Revenue</b>	<b>\$16,534,710</b>
Contractual Obligations:	
Transfer to Radio Debt Fund	5,691,600
Transfer to Facility Capital Fund	4,150,000
Transfer to Lease Reserve	2,300,000
Transfer to Radio User Fee Fund	850,000
<b>Total Contractual Obligations</b>	<b>\$12,991,600</b>
<b>“Excess” Sales Tax Revenue</b>	<b>\$ 3,543,110</b>



“Excess” Revenue from the Sales and Use Tax is offsetting Member and Non-Member allocation fees.

Table 18 shows that South Sound 911 requires over \$19 million in Member and Non-Member allocation fees to cover operational expenses.

Table 18. South Sound 911 2018 Budgeted Allocation Revenue

Category	Amount
<b>Total Operational Expenses</b>	<b>\$27,483,590</b>
Excise Tax Revenue from Pierce County E911	4,301,590
Excess Sales and Use Tax Revenue	3,543,110
<b>Total Revenue without Allocations</b>	<b>7,844,700</b>
Difference to Make up from Allocation Revenue	19,638,890
<b>2018 Budgeted Allocation Revenue</b>	<b>\$18,919,890</b>
Revenue Shortfall	(\$719,000)

#### Use of Pierce County 1/10 of 1% Sales and Use Tax – Recommendations

Recommendation 3.4.1: Continue to prioritize expenditures per contractual agreements.

DELTAWRX recommends that South Sound 911 continue to prioritize expenditures per contractual agreements. If debt service and capital investment costs decrease, freeing up additional revenue to offset the Member and Non-Member allocation fees, South Sound 911 should decrease the allocation fees accordingly.

Recommendation 3.4.2: South Sound 911 should develop a strategic plan for capital projects, technology investments, radio management and staffing

South Sound 911 is nearing the end of its transition to a single, county-wide dispatch center and is approaching a cycle of relative stability. Since its inception, South Sound 911 has needed to make several “ad hoc” decisions to accommodate changing circumstances and provide a bridge to stable operations. A proactive approach to future decision-making can mitigate the impact of changes to future circumstances and help ensure that decisions reside within an overall vision for South Sound 911. A strategic plan that includes an assessment of the current environment as well as a vision for the future will guide decision-making, ensure the strategic use of taxpayer money, and provide a framework for a wise capital investment plan.



### 3.5 South Sound 911 Governance Model

DELTAWRX was asked to evaluate the structure of South Sound 911 as an interlocal agency and provide information regarding other governance models. DELTAWRX explored two aspects of governance that were expressed by the Steering Committee and members of the Boards as being of interest, namely the source of powers and the organizational entity to whom the Executive Director reports.

#### Source of Power Options

Table 19 summarizes options under the RCW for sources of power for local governments to jointly provide services in a way that best meets the joint needs of the local communities.

Table 19. Options for Sources of Power under Revised Code of Washington

	Legal Structure	Separate Legal Entity	Clarity of Powers and Responsibilities	Able to Issue Debt	Strength of Liability Protection for Agencies
<b>Interlocal Agreement Under RCW 39.34</b>	Simple Service Contract	No	Yes	Yes (Host Agency)	None <sup>1</sup>
	Joint Board Structure	No, but new entity created	No	No	None
	Non-Profit Corporation	Yes	No	Maybe	Strong
	Limited Liability Corporation	Yes	No	Maybe	Strong
<b>Public Corporation Under RCW 35.21</b>	Public Corporation	Yes	Yes	Yes	Strongest

At a high level, the local governments can execute an interlocal agreement under RCW 39.34 or they can form a public corporation under RCW 35.21. Under RCW 39.34, governments have options in deciding how to structure the interlocal agreement and can do so in a manner that is best suited for the involved communities. The four options are:

- Simple service contract, in which a host agency executes a contract to provide services to another agency
- Joint board structure, which provides for the administration of the venture by a board consisting of representatives of participating governments

- Non-profit corporation organized under RCW 24.03 or 24.06 with membership limited to public agencies and in which the participating governments can structure the decision making and control mechanisms as they desire, subject only to constraints in nonprofit corporation laws
- Limited liability corporation organized under RCW 25.15 with membership limited to public agencies, a rare structure that allows the participating governments to structure decision making and control mechanisms as they desire without constraint

Table 19 highlights some of the key differences among the four structural options. Non-profit and limited liability corporations are legal entities separate from the governments that formed them. As such, they can provide liability protection to its members. The protection, while strong, is not guaranteed. Although the simple service contract structure does not create a separate legal entity, the host agency can provide the serviced agency or agencies indemnification through the contracting device.

A joint board structure is not able to issue debt, although a member can borrow on behalf of the venture. Nonprofit and limited liability corporations can issue debt if authorized by express statutory authority. In all cases, repayment would need to be secured by commitments from one of the local governments.

A criticism of the ILA is the lack of clarity with respect to the ability to issue debt and the extent to which governments can delegate powers to an interlocal entity. Additionally, provisions under the nonprofit and limited liability statutes (24.03, 24.06 and 25.15) are geared to private entities and may conflict with laws governing public sector organizations.<sup>19</sup>

The majority of consolidated communications centers in the State of Washington are organized under RCW 39.34. Recently, two consolidated communications centers have re-organized under a different statute, namely as a public corporation under RCW 35.21.

Under 35.21, governments can create public corporations, commissions, and authorities to provide services for public purposes. As a legal entity separate from the governments that created it, this form of incorporation provides strong liability protection to the local governments. Additionally, the specific powers, such as issuing debt, expending funds, entering

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<sup>19</sup> Much of the material in this section is drawn from the work of Hugh Spitzer, a Professor of Law at the University of Washington Law School. For an in-depth discussion of the differences and challenges of each structural option, please see: Spitzer, H. (2016). *The Interlocal Cooperation Act: What Form of Interlocal Entity is "Base" ... And Does the Interlocal Cooperation Act Need a Rewrite?* Paper presented at Washington Association of Prosecuting Attorneys Training Programs 2016 – Civil Track.

into contracts, employing personnel, paying taxes, and owning property, as well as limitations of powers, are unambiguously defined in RCW 35.21.740 – 759.

### Overview of South Sound 911 Governance

In 2011, Pierce County (County), the City of Tacoma (Tacoma), the City of Lakewood (Lakewood), the City of Fife (Fife) and West Pierce Fire and Rescue (WPFR) signed an interlocal agreement pursuant to RCW 39.34 to use the funds approved by the sales and use tax of 1/10 of 1% to create South Sound 911, a communications center with the ultimate purpose of servicing all Pierce County public safety agencies. The five Member Agencies amended the original Interlocal Agreement (ILA) in 2014 to add the City of Puyallup (Puyallup) as the sixth Member Agency. South Sound 911 is responsible for providing communications services to Member Agencies, as well as Non-Member Agencies, which pay a fee for the services.

RCW39.34 states that the ILA must contain a provision for an administrator or joint board responsible for administering South Sound 911, as well as the manner of acquiring, holding and disposing of property. Under the statute, the joint board can establish a special fund with the designated treasurer, which, in the case of the South Sound 911 and pursuant to RCW 43.09.285,<sup>20</sup> is Pierce County.

A Policy Board consisting of elected or appointed officials is responsible for financial and policy decisions. An Operations Board consisting of chiefs of law enforcement and fire agencies is under the authority of the Policy Board. Two committees, the Law Enforcement Services and the Fire Services Committee, comprise the Operations Board. Each committee has one vote on decisions and a tie is broken by the Policy Board. The Operations Board is responsible for operational policies and supervises the Executive Director. The Executive Director is responsible for managing the administration, budget, personnel, operations, and security of South Sound 911 commensurate with the policies set by the Policy and Operational Boards. The Executive Director is appointed by the Operations Board subject to confirmation by the Policy Board.

Funding to operate South Sound 911 comes from several sources, including a guaranteed 29% of the E911 Excise Tax, the 1/10 of 1% Sales and Use Tax, and user assessments. Personnel

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<sup>20</sup> Whenever by law, two or more municipal corporations or political subdivisions of the state are permitted by law to engage in a joint operation, the funds of such joint operation shall be deposited in the public treasury of the municipal corporation or political subdivision embracing the largest population or the public treasury of any other as so agreed upon by the parties; and such deposit shall be subject to the same audit and fiscal controls as the public treasury where the funds are so deposited: PROVIDED, That whenever the laws applicable to any particular joint operation specifically state a contrary rule for deposits, the specific rule shall apply in lieu of the provisions of this section: PROVIDED, FURTHER, That nothing contained herein shall be construed as limiting the power or authority of the disbursing officer of such joint operation from making disbursements in accordance with the provisions of any contract or agreement entered into between the parties to the joint operation.

working at South Sound 911 are employees of South Sound 911, not of any of the member agencies.

Per the ILA, as amended in 2014, South Sound 911 owns the assets it acquires, with the exception of radio systems infrastructure and end user subscriber units, which belong to the Member Agencies that operate them. As an entity, South Sound 911 cannot issue bonds or assume its own debt. However, the County can assume debt on behalf of South Sound 911 and assets purchased from the borrowed money belongs to the County until South Sound 911 has repaid the debt.

## Benchmarking

To provide additional information on governance options, DELTAWRX benchmarked five Washington communications centers. The Steering Committee agencies validated the selection of CRESA, Kitsap911, TCOMM11, ValleyComm and NORCOM as suitable for this exercise. Table 20 provides an overview of the benchmarked agencies, as well as South Sound 911.

Table 20. Benchmarked Communications Centers

PSAP/County	Agencies Serviced	Population Served	Annual Calls Annual CFS	Primary PSAPs	Secondary PSAPs
<b>South Sound 911/ Pierce</b>	Law: 19 Fire/EMS: 19	844,000	920,193 699,979	SS911, JBLM, WSP	Tacoma Fire
<b>CRESA911/Clark</b>	Law: 9 Fire/EMS: 14 Other: 3	467,000	410,000 365,000	CRESA	WSP
<b>Kitsap911/Kitsap</b>	Law: 7 Fire/EMS: 6	251,133	331,860 257,900	Kitsap911 US Navy NB	US Navy NB WSP
<b>TCOMM911/ Thurston</b>	Law: 8 Fire/EMS: 12	252,264	407,038 240,632	TCOMM	N/A
<b>ValleyComm/King County</b>	Law: 9 Fire/EMS: 12	700,000	593,368 520,673	12 Primary	3 Secondary
<b>NORCOM/King County</b>	Law: 5 Fire/EMS: 13	>344,00	262,088 194,000	12 Primary	3 Secondary

NORCOMM, TCOMM911 and ValleyComm are ILAs organized under RCW 39.34. Like South Sound 911, ValleyComm has a joint board structure, but NORCOMM and TCOMM911 are organized as non-profit corporations. Kitsap911 and CRESA are public corporations, formed under RCW 35.21. TCOMM911, Kitsap911 and CRESA have not always been organized as they are today. Before 2011, TCOMM911 was a Thurston County agency. Before 2016, communications services in Kitsap County were provided by CENCOM, a joint board structure formed under RCW 39.34 and in November 2017 CRESA in Clark County transitioned from a joint board structure under RCW 39.34 to a public development authority under RCW 35.21.

Table 21 summarizes each agency's reason for selecting its current governance structure. CRESA911 and Kitsap911 both stated better liability protection and clearer description of organizational powers and responsibilities as a reason for their transitions to becoming a public authority. TCOMM911 stated financial concerns as the trigger for its reorganization. NORCOM, which formed at a later date than ValleyComm researched options under the 39.34 and organized as a non-profit to provide better protection for the entities creating the organization.

Table 21. Benchmarked Agencies Reasons for Selecting Governance Structure

Communications Center	Structure	Stated Reasons for Choice of Organization
CRESA911	911 Public Development Authority	<ul style="list-style-type: none"> <li>▪ Better description of organizational powers, roles and responsibilities</li> <li>▪ Better liability protection for the entities creating the organization</li> </ul>
Kitsap911	911 Public Development Authority	<ul style="list-style-type: none"> <li>▪ Overlap of Kitsap County and Communications Center responsibilities under ILA ("not a clean hierarchy")</li> <li>▪ Public corporation has a clear set of public rules and laws</li> <li>▪ Ability to issue bonds and take on debt<sup>1</sup></li> <li>▪ Put Communications Center on "same playing field" as other agencies</li> <li>▪ Better liability protection for the entities creating the organization</li> </ul>
NORCOM	Non-profit ILA	<ul style="list-style-type: none"> <li>▪ Better liability protection for the entities creating the organization</li> </ul>
TCOMM911	Non-profit ILA	<ul style="list-style-type: none"> <li>▪ Left County to save money (saved about \$200,000 annually)</li> <li>▪ Used LOTT Clean Water Alliance as a model</li> </ul>
ValleyComm	Joint Board ILA	<ul style="list-style-type: none"> <li>▪ Joint Board ILA was the common form of organization when formed in 1976; has not been asked or advised to change form of organization since ValleyComm's inception</li> </ul>

DELTAWRX also researched the reporting structure within the benchmarked agencies. In particular, we identified whether the Executive Director report to elected officials or chiefs of public safety agencies and asked about the perceived benefits and challenges of the reporting structure. The Executive Directors for Kitsap911, TCOMM911 and ValleyComm report to elected officials; in the reporting structure they are considered peers of the chiefs of the public safety agencies their communications centers service. Since CRESA911 has one board consisting of a combination of elected officials and agency chiefs, its Executive Director reports to both elected officials and agency chiefs. The NORCOM Executive Director is appointed by and serves at the pleasure of the Governing Board, which consists of a combination of elected or appointed officials and agency chiefs. Several of the interviewed Executive Directors have

worked under different reporting structures at other communications centers and provided their perspective on the relative differences between their current and past experiences.

Table 22 summarizes the perceived advantages of reporting to elected officials versus agency chiefs. Stated advantages of reporting to elected officials focused on the political weight and fiduciary responsibility carried by elected officials, as well as differentiating communications center operations from public safety operations. They also emphasized the role of the Executive Director as the person responsible for strategic planning, setting policies and developing and managing budgets; since elected officials are accountable to the public, the Executive Director should be accountable to the elected officials.

Given the tightly coupled operations of communications centers and the agencies they service, the structure in which the Executive Director reports to agency chiefs is seen as beneficial. Agency chiefs and the Executive Director are aware of operational opportunities and constraints in both entities and agency chiefs can influence operations to benefit serviced agencies.

Finally, the stated benefit of the Executive Director reporting to a mixed oversight board is that one entity is making all the financial, operational and policy decisions and is likely to take a broader set of factors into account when making decisions.

Table 22. Stated Advantages of Reporting to Elected Officials Versus Agency Chiefs

Reporting Structure	Stated Advantages of Reporting Structure
Executive Director Reports to Elected Officials	<ul style="list-style-type: none"> <li>▪ Puts Executive Director on the same level as agency chiefs; agency chiefs can advise Executive Director but Executive Director makes the final decisions, subject to approval from elected officials</li> <li>▪ Executive Director is responsible for high level strategic, policy issues and budgets which is where the elected officials should spend their energy</li> <li>▪ Elected officials have fiduciary responsibility for communications center</li> <li>▪ Elected official look at 911 operations from the constituent perspective and it is their job to focus on the big picture</li> <li>▪ Allows Chiefs to focus on operational issues and representing the concerns of their agencies</li> <li>▪ Differentiates between running a communications center and running a law enforcement or fire agency</li> <li>▪ Elected officials have a political presence they can use to go to bat for the communication center (e.g., procuring funding)</li> </ul>
Executive Director Reports to Agency Chiefs	<ul style="list-style-type: none"> <li>▪ Agency chiefs are engaged and can influence operations to benefit serviced agencies</li> <li>▪ Executive Director knows what is going on with agencies</li> </ul>
Executive Director Reports to Both	<ul style="list-style-type: none"> <li>▪ Board can make all financial, operational and policy decisions</li> <li>▪ Members can make decisions on behalf of the entities they represent</li> </ul>

## Governance Conclusions

The benchmarking exercise shows that South Sound 911 is not bound by its current governance structure; other consolidated communications centers have reorganized successfully to reduce liability for the Member Agencies, increase clarity of organizational powers and responsibilities, and reduce costs of operating under the county government.

The benchmarking exercise also shows that the Executive Director can report to or be a peer of the chiefs of the agencies the communications center services, and there are benefits of both structures.

The benefit of issuing debt might be tempered by the ability of South Sound 911 to secure debt without a credit rating and a history of operation.

DELTAWRX was not asked to make a recommendation regarding governance. If the Member Agencies want to consider alternative governance structures we suggest that any decision to reorganize South Sound should be based on a set of principles and concepts regarding:

- The role of South Sound 911 in the county
- The relationship between South Sound 911 and the agencies it services
- Liability and risk
- The desire and ability to incur debt, along with the long-term implications of assuming the debt

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## Appendix A Guidelines for Establishing a Quality Assurance Program

Industry standards such as CALEA, APCO and NFPA provide specific guidance on developing quality assurance programs. DELTAWRX offers South Sound 911 the following ten tasks as a starting point for developing a QA program.

1. Establish call processing goals that are consistent with industry standards and are consistent with dispatched agencies' reporting requirements
2. Collect metrics for each call processing goal on a regular basis (e.g., monthly)
3. Publish reports on performance internal and external audiences on a regular basis (e.g., monthly and quarterly, respectively)
4. Identify trends in call processing performance
5. Randomly review calls to evaluate compliance with protocols on both a qualitative and quantitative basis (spot checks)
6. Facilitate dialogue between Quality Assurance, Supervisory and Training staff to ensure negative trends in call processing performance are addressed with targeted training initiatives and areas of concern at the individual level are addressed with on-the-job training, discipline or other methods
7. Coordinate after action debrief sessions with stakeholder agencies to capture lessons learned and continuously refine standard operating procedures
8. Provide feedback from individual assessments and spot checks into performance evaluations
9. Respond to information requests from dispatched agencies as necessary
10. Partner with the Pierce County-Tacoma Health Department to build and refine EMD QA and training activities

## Appendix B Recommended Call Taker and Communications Support Officer Staffing

DELTAWRX used the Erlang-C formula to determine optimal call taker staffing, and based our analysis on the following assumptions:

- Average 911 call length: 127 seconds
  - Average 10-digit call length: 119 seconds
  - Desired service level: 90% of calls answered within 10 seconds, per the NENA standard
  - Average leave time (including sick days, vacation days, breaks and training): 543 hours for law enforcement and 674 hours for fire/medical aid personnel
- Between 5.7 and 6.23 full time equivalents (FTE) are required to cover a 24-hour position

We further assume that South Sound 911 will move to a unified call taker model and project incoming call volumes as shown in Table 23. Our projections show incoming calls decreasing from current environment by 114,356 calls per year due to the fact that fire/medical aid calls will no longer need to be answered twice. To be conservative in our projections, we assume that the number of transfers to/from the Washington State Patrol will remain the same as the current state.

Table 23. Projected Call Volume Under Unified Structure

	Law	Fire/ Medical Aid	Total
Annual Incoming 911 Calls	430,594	121,772	<b>552,366</b>
Annual Incoming Admin Calls	376,413	39,542	<b>415,955</b>
<b>Total Annual Incoming Calls</b>	<b>807,007</b>	<b>161,314</b>	<b>968,321</b>

Although DELTAWRX had total call volume data, South Sound 911 was unable to provide incoming call volume on an hourly basis, a key input into determining optimal hourly staffing. As a proxy for this data, DELTAWRX applied the distribution of law enforcement CAD events by hour of day to the incoming call volume data, assuming that incoming call volume mirrors CAD event volume. Hourly fire events were not provided, but since law enforcement events account for 83 percent of South Sound 911's dispatched events we feel comfortable using the distribution of law enforcement data as a close proxy. Table 24 shows our estimation of total hourly incoming calls for both law enforcement and fire/medical aid (combined) by hour of day.

Table 24. Projected Hourly Incoming Call Volume (Combined Law Enforcement/Fire/Medical)

Hour of Day	Incoming Calls
0000	119
0100	99
0200	81
0300	67
0400	52
0500	43
0600	42
0700	61
0800	78
0900	105
1000	116
1100	125
1200	128
1300	128
1400	144
1500	147
1600	153
1700	144
1800	138
1900	143
2000	130
2100	133
2200	140
2300	137
<b>Total</b>	<b>2653</b>

Table 25 shows the projected number of call takers required per hour based on the assumptions stated at the beginning of section 2.3, and the call volumes provided in Table 24.

Table 25. Projected Unified Call Takers Required Per Hour

Hour of Day	Call Takers Required for Each Hour of the Day
0000	8
0100	7
0200	7
0300	6
0400	5
0500	4
0600	4
0700	5
0800	6
0900	7
1000	8
1100	8
1200	8
1300	8
1400	9
1500	9
1600	9
1700	9
1800	9
1900	9
2000	8
2100	8
2200	9
2300	9
<b>Total</b>	<b>179</b>

Based on the leave assumptions at the beginning of this subsection, it would require approximately 43 FTE to cover 179 hours of call taker work per day, or 65,335 hours of call taker work per year. This projection rounds up the number of FTE required on an hourly basis to account for “whole persons.” We segregate the 43 FTE by unified call takers and Communications Support Officer (CSO) in Table 26 based on the current practice of CSOs

handling roughly 40,000 calls per year, and the assumption that fire would benefit from the addition of a CSO to answer administrative lines in the unified call taker scenario.

Table 26. Recommended Call Takers and CSOs

Position	Law	Fire/Medical Aid
Recommended Unified Call Takers	33	
Recommended CSOs	9	1

## Appendix C Analysis of Use of E911 Funds

The tables in this appendix include actual numbers for 2016 to show how funds have been used in the past, and budgeted numbers for 2017 and 2018 to show how DEM plans to use the funds in future years. The numbers for 2017 have been updated as the year progressed and those shown are the most recent updates available as of November 2017.

### E911 Excise Tax Fund Overview

The Pierce County Department of Emergency Management (DEM) manages the E911 Excise Tax Revenue Fund along with four other funds: Emergency Management, Emergency Management Grants, Combined Communications Network (CCN), and Radio Communications. Table 27 provides an overview of the E911 Excise tax fund as expended in 2016 and as budgeted for 2017 and 2018.

Table 27. Pierce County E911 Excise Tax Funds

Cost Category	2016 Actual	2017 Budget	2018 Budget
<b>Beginning Fund Balance</b>	<b>\$ 6,919,000</b>	<b>\$ 5,785,454</b>	<b>\$ 4,200,000</b>
Excise Tax Revenues	7,914,571	7,922,150	8,205,370
Grant Revenue	87,894	77,090	80,090
Miscellaneous Revenue	5,311	200	200
<b>Total Available E911 Funds</b>	<b>14,926,776</b>	<b>13,785,440</b>	<b>12,485,660</b>
Expenditures	9,141,322	8,920,640	10,429,840
<b>Ending Funding Balance</b>	<b>\$ 5,785,484</b>	<b>\$ 4,864,800</b>	<b>\$ 2,055,820</b>

Fund balances grow in years when expenditures fall short of the authorized budget. In years when budgeted expenditures exceed revenues, the difference is covered by the surplus accumulated in previous years.

In 2016, with a fund balance of almost \$7 million, total available E911 funds were almost \$15 million. Expenditures that year exceeded tax revenues, and DEM used the reserves in the fund balance to cover the \$1.2 million difference, leaving a fund balance of \$5.8 million and \$13.7 million in available funds for 2017.

In 2017, expenditures are again expected to exceed tax revenue, this year by about \$1 million, leaving a fund balance of \$4,864,600 at the beginning of 2018.

The reported budget assumes the fund will start 2018 with a balance of \$4.2 million, about \$665,000 shy of the projected 2017 ending fund balance. With estimated expenditures over \$2

million higher than expected revenues in 2018, the fund balance will be close to \$2 million by the end of next year.

Table 28 shows an overview of E911 fund expenditures from 2016 through 2018. The following sections explore the detail of each cost category.

Table 28. Overview of E911 Fund Expenditures

Cost Category	2016 Actual	2017 Budget	2018 Budget
E911 Program Office Expenses	\$ 462,416	\$ 740,700	\$ 990,800
Professional Services	759,395	1,918,320	1,132,920
Central Service and DEM Allocation Costs	929,487	1,072,500	1,120,480
SS911 Allocations	4,135,467	4,041,920	4,185,840
Capital Outlays	313,607	-	1,999,800
Transfer Out	2,540,960	1,147,200	1,000,000
<b>Total</b>	<b>\$ 9,141,332</b>	<b>\$ 8,920,640</b>	<b>\$ 10,429,840</b>
<b>Revenue</b>	<b>\$8,007,866</b>	<b>\$7,999,440</b>	<b>\$8,285,660</b>
<b>Use of Fund Balance</b>	<b>\$ 1,133,467<sup>21</sup></b>	<b>\$ 921,200<sup>22</sup></b>	<b>\$ 2,144,180<sup>23</sup></b>

### E911 Program Office Expenses

E911 Program Office expenses include costs directly attributable to the activities associated with the E911 fund. Professional services could also be considered a direct cost, but for the purpose of understanding how the E911 taxes are expended, we considered them separately. E911 Program Office expenses include the salaries and benefits for the 4.1 FTEs supporting the E911 Office, along with categories like supplies, travel, training, telephone communication, and repairs and maintenance. Table 29 shows the detailed breakdown of E911 Program Office

<sup>21</sup> 2016 use of fund balance is based on the difference between reported revenue and reported expenditures as reported on financial information provided by the County. After the Validation Workshop, the County provided new information showing the 2016 use of fund balance to be \$1,226,760. The difference between the two numbers is the revenue from grants, which shows on the original financial information but not on the new information.

<sup>22</sup> 2017 use of fund balance is based on the difference between budgeted revenue and budgeted expenditures as reported on financial information provided by the County. After the Validation Workshop, the County provided new information showing the 2017 use of fund balance to be \$834,170. Total expenditures reported are also lower, which may reflect updates to the financial information based on actual expenditures.

<sup>23</sup> 2018 use of fund balance is based on the difference between budgeted revenue and budgeted expenditures as reported on financial information provided by the County. The budgeted revenue takes into account income from grants. After the Validation Workshop, the County provided new information in which the use of funds amount is consistent with the original financial information. Revenues on the new information do not reflect revenue from grants.

expenses for 2016 – 2018. As can be seen in the table, the bulk of the direct costs come from salaries and benefits, although in 2018, the amount budgeted repairs and maintenance is expected to more than triple to \$355,290 due to maintenance costs for customer premise equipment at JBLM and WSP.

Table 29. E911 Program Office Expenses

Expense	2016 Actual	2017 Budget	2018 Budget
Salaries and Benefits	\$ 357,977	\$ 466,890	\$ 472,430
Supplies	31,002	76,330	75,280
Public Utility Services	958	-	-
Mail and Postage	66	200	210
Freight Expense	42	-	-
Other Miscellaneous	7,340	18,500	3,310
Travel	1,191	25,100	200
Training	14,790	600	52,500
Telephone Communication	21,746	52,000	23,080
Repairs and Maintenance <sup>1</sup>	19,804	92,580	355,290
Repairs and Maintenance - IT	-	1,000	1,000
IT - GIS Ortho Contours	7,500	7,500	7,500
<b>Total Direct Costs</b>	<b>\$ 464,526</b>	<b>\$ 740,700</b>	<b>\$ 993,040</b>

#### Professional Services

Table 30 shows expenses that the County categorizes as professional services from 2015 through 2018. Contracted professional services vary from year to year. Some expenses, such as the telephone system analysis performed by Mobius Solutions, are one-time expenses. Others, such as the maintenance contract for the Everbridge Alert and Warning System, are annual expenses. The County has had several contracts with Stantec Consulting for various projects related to the County's radio system, starting in 2011. Critical Infrastructure Cyber Security Consultants initially provided the County with recommendations and guidance to ensure the availability and integrity of the 911 phone system. Based on the recommendations, Critical Infrastructure Cyber Security Consultants was engaged to provide additional consulting services for the following:

- WSP and South Sound 911 CPE upgrades
- Staff augmentation during Telecommunications Specialist absence from E911 Office



- Puyallup and JBLM InfoSec upgrade and text-to-911 implementation
- Project definition for a continuity of operations plan for the E911 Program Office
- Project definition for developing E911 Office security policies and procedures

Table 30. Professional Services Expenses

Expense	2015 Actual	2016 Actual	2017 Budget	2018 Budget
Everbridge Alert & Warning Contract	\$181,160	\$183,270	\$296,900	\$180,000
Emergency Broadcast Radio (KGHP)	25,000	25,000	25,000	-
LAHAR Satellite Annual Lease	19,330	-	-	-
Console Cleaning	17,680	-	-	-
Stantec Consulting	560,000	274,220	251,000	190,000
Mobius Solutions - Phone System Analysis	25,000	-	-	-
Telco	29,410	29,760	30,000	-
West Pierce Fire - Duty Officer Dispatch	-	50,000	-	-
State Audit	-	1,220	-	-
Danard Electric (WSP Tacoma)	-	930	-	-
Critical Infrastructure Cyber Sec. Consultant <sup>6</sup>	-	195,000	249,000	190,000
State-Wide Telephone Services	-	-	566,420	566,420
P3 NG Security	-	-	500,000	-
Centurylink Database Extract	-	-	-	5,000
WSP Monitoring/Support lines	-	-	-	1,500
<b>Total Professional Services</b>	<b>\$857,580</b>	<b>\$759,400</b>	<b>\$1,918,320</b>	<b>\$1,132,920</b>

The contract with P3 NG Security in 2017 is to coordinate the County's E911 infrastructure with the State's ESInetII rollout. The amount budgeted for State-Wide Telephone Services is a contingency fund that, according to the County, is required by the State.

#### Central Services and DEM Allocation Costs

A portion of the County's administrative and IT costs (central services costs) are allocated to each County based on formulas for each allocated cost category. Additionally, since funding for the FTEs for higher level administration of the various DEM divisions comes out of the Emergency Management fund, a portion of the costs from that fund are allocated to the other four funds that the DEM manages (cost pool allocations). Table 31 shows the amount of each central service cost category, as well as the DEM costs, allocated to the E911 Excise Tax fund.

Table 31. Central Service and DEM Costs Allocated to E911 Excise Tax Fund

Allocated Cost Category	2016 Actual	2017 Budget	2018 Budget
State Audit Reimbursement + Performance Audit	\$ 8,031	\$ 11,590	\$ 10,560
Self-Insurance Reimbursement + Medical Self Insurance	7,170	7,250	5,830
Space Rental from County/External Lease	81,112	88,970	87,560
IT Enterprise Allocation	17,200	16,380	180,750
IT Financial/HR Systems Allocation	14,070	12,050	17,840
IT Central New Investment Allocation	14,910	8,670	-
IT Systems Support Allocation	321,400	400,480	278,440
IT Systems New Investments	75,484	35,090	-
Indirect Costs	83,730	95,440	116,710
Routing and Delivery	2,110	2,150	2,240
County Wide Security + Sustainability Reimbursement	1,031	970	1,110
Government Relations Reimbursement	-	5,390	3,920
<b>Total Central Service Allocation Costs</b>	<b>\$ 626,249</b>	<b>\$ 684,430</b>	<b>\$ 704,960</b>
DEM Cost Pool Allocation	303,238	388,070	415,520
<b>Total Allocated Costs</b>	<b>\$ 929,487</b>	<b>\$ 1,072,500</b>	<b>\$ 1,120,480</b>

Several numbers in Table 31 warranted further investigation:

- The charge for space rental, which will be over \$7,000 per month in 2018, for 4.1 FTEs
- The total costs for IT support, which are budgeted to be around \$475,000 for 2017 and 2018
- Indirect costs, which will be over \$100,000 in 2018
- DEM cost pool allocation, which will be over \$415,000 in 2018

Understanding the overhead allocations required understanding the basis on which each cost was allocated, as well as the allocations to the E911 Excise Tax fund relative to the allocations to other DEM funds.

**Relative Allocations.** Table 32 shows the overhead allocated to the E911 Excise Tax fund relative to the overhead allocated to the other DEM funds. At \$705,000, the central service

allocation to the E911 Excise Tax fund is the highest of the five DEM funds. Although DEM assigns the fewest number of FTEs to the E911 Program Office, the DEM cost pool allocation is second highest. As discussed in the remaining paragraphs of this section, overhead cost allocations reflect factors other than the number of FTEs in a department.

Table 32. 2018 Central Service and DEM Cost Pool Allocations by DEM Department

	Emergency Mgt	E911 Excise Tax	Emergency Mgmt. Grants	CCN	Radio Comms	Total
FTEs	28	4.1	12	4.8	10.1	59
State Audit + Performance Audit	\$ -	\$ 10,560	\$ 1,790	\$ 2,970	\$ 10,300	\$ 25,620
Self-Insurance + Medical Self Insurance	53,900	5,830	27,350	5,490	31,700	124,270
Space Rental from County	82,030	87,560	103,330	14,070	91,160	378,150
IT Enterprise Allocation	264,870	180,750	80,950	8,070	57,750	592,390
It Financial/Hr Systems Allocation	33,670	17,840	19,860	9,990	24,050	105,410
It Central New Investment Allocation	14,990	-		-	-	14,990
It Systems Support Allocation	72,640	278,440	55,360	-	-	406,440
County-Wide Indirect Costs	-	116,710	34,540	54,650	157,320	363,220
Routing and Delivery	8,660	2,240	-	0	2,240	13,140
County-Wide Security + Sustainability	7,590	1,110	4,110	270	2,690	15,770
Government Relations Reimbursement	4,170	3,920		2,040	3,910	14,040
<b>Total Central Service Allocation Costs</b>	<b>\$ 542,520</b>	<b>\$ 704,960</b>	<b>\$ 327,290</b>	<b>\$ 97,550</b>	<b>\$ 38,120</b>	<b>\$2,260,180</b>
DEM Cost Pool Allocations	-	415,520	328,810	226,310	449,430	1,420,070
<b>Total</b>	<b>\$ 542,520</b>	<b>\$ 1,120,480</b>	<b>\$ 656,100</b>	<b>\$ 323,860</b>	<b>\$ 830,550</b>	<b>\$3,680,250</b>

**Space Rental.** Allocations for space rental are based on the total square footage occupied by the people and equipment supported by the fund. Table 33 shows the space allocated to each DEM fund. The space dedicated to emergency management operations, the emergency operations center (EOC) is allocated to the E911 Excise Tax fund, which explains why, with 4.1

employees, the amount of space allocated to the Excise Tax funds appears high relative to that allocated to the other funds.<sup>24</sup>

Table 33. DEM Space Allocation

Building	Emergency Management	E911 Excise Tax	Emergency Management Grants	CCN	Radio Communications
FTEs	28	4.1	12	4.8	10.1
County City Building				610.00	
Annex	2,613.00			297.00	
Annex West	6,267.29	11,800.24	13,927.11	288.79	281.57
112th St					15,877.01
<b>Total Square Footage</b>	<b>8,880.29</b>	<b>11,800.24</b>	<b>13,927.11</b>	<b>1,195.79</b>	<b>16,158.58</b>

**IT Support.** The basis for the IT support costs are as follows:

- IT Enterprise and Central New Investment: Weighted average of FTEs, computers and ports compared to total County-wide staff, computers and ports
- IT Financial/HR Systems: Formula including transaction counts, actual fund expenditures and FTEs
- IT Systems Support: Formula including hours of support, data storage used on servers and IT systems used only by the department

At over \$475,000, IT costs allocated to the E911 Excise Tax fund are over 40% of the \$1.1 million allocated to all DEM funds. The computers and computer systems supporting EOC operations are allocated to the E911 Excise tax fund, which explains why the costs seem high relative to the other DEM departments.

**County-Wide Indirect Costs.** County-wide indirect costs attributed to each fund are based on the funds' share of the County budget. Table 34 shows revenues and expenditures less the county-wide overhead attributed to each DEM fund, along with the county-wide indirect costs

<sup>24</sup> 2018 Space allocation is 11,000 square feet at the County's W. Annex building, which contains 5 consoles and 2 CAD positions that provide PSAP and first responder back up, and a "call center" staffed by multiple agencies during emergencies. The call center handles citizen and first responder calls during disasters, and law enforcement activities including Child Abduction Response Team, Tip Lines and resource requests. The E-911 Community Educator works at the W. Annex location and the other 3.1 FTE E-911 staff work at the County's 112<sup>th</sup> Street location. The 112<sup>th</sup> Street move occurred after the 2018 space costs were developed. In 2019, the County's charge for space rental will increase to account for the occupied space at 112<sup>th</sup> Street.

attributed to each fund. The table also shows the use of fund balance required to account for budgeted expenditures higher than expected revenues.

Table 34. 2018 Budgeted DEM Fund Revenues and Expenditures

	Emergency Mgt	E911 Excise Tax	Emergency Mgmt. Grants	CCN	Radio Comms	Total
FTEs	28	4.1	12	4.8	10.1	59
Total Revenues	\$1,260,880	\$8,285,660	\$3,001,850	\$3,871,300	\$7,694,740	\$24,114,430
Use of Fund Balance	\$2,458,610	\$2,144,180	\$275,800	\$59,090	\$743,100	\$5,680,780
Total Expenditures Less County-Wide Overhead	\$3,176,970	\$9,724,880	\$2,950,360	\$3,932,840	\$8,399,720	\$27,635,030
County-Wide Indirect Costs	-	\$116,710	\$34,540	\$54,650	\$157,320	\$363,220

Even though E911 Excise Tax fund revenues and expenditures are higher than those for the Radio Communications fund, county-wide indirect costs are lower, so it is likely that the allocation formula includes a factor other than the department's share of the County budget. Regardless, the amount of tax money used to pay for expenses through the E911 Excise Tax fund is the major contributing factor to the county-wide indirect costs attributed to that fund.

**DEM Cost Pool Allocations.** DEM cost pool allocations are indirect costs incurred by the DEM that do not directly benefit a specific function within the department. DEM tracks those costs through the use of an administrative cost pool that consists of the salaries, benefits, support costs and general department-wide costs for the following staff:

- Department Director
- Department Deputy Director
- Two Emergency Management Program Managers
- Administrative Program Manager
- Grant Accountant, Accountant and Accounting Assistant
- Confidential Secretary
- Office Assistant
- Information Technology Specialist

DEM allocates the administrative cost pool to the DEM funds using a rate that is calculated from direct costs less one-time, equipment, pass-through and transfer costs, and adjusted levels of eligible reimbursement for certain programs. Ultimately, the allocation reflects revenues passed through the fund, which explains why the DEM cost pool allocations seem relatively high given the number of FTEs in the E911 Program Office.

#### South Sound 911 Distributions

Per the Interlocal Agreement, the County distributes \$.20 of the \$.70 E911 Excise Tax fund revenue (28.5%) to South Sound 911 each year. Additional allocations are agreed upon annually. Table 35 shows the E911 Excise Tax fund distributions to South Sound 911.

Table 35. E911 Excise Tax Distributions to South Sound 911

Cost Category	2016 Actual	2017 Budget	2018 Budget
\$.20 Excise Tax Distribution to South Sound 911	\$2,220,519	\$2,084,250 <sup>25</sup>	\$ 2,285,190
Additional Distributions to South Sound 911	1,934,948	1,957,670	2,016,400
<b>Total</b>	<b>\$ 4,135,567</b>	<b>\$4,041,920</b>	<b>\$4,185,840</b>

#### Capital Outlays and Transfers Out

Table 36 shows the capital outlays and transfers out from the E911 Excise Tax Fund. Capital outlays from 2016 through 2018 include almost \$2.5 million for the Pierce County Corrections Bureau radio systems improvement project. \$3 million is budgeted for transfer to the Radio Communications fund to pay for the 700 and 410 overlay projects. Detail provided by the County for the E911 Excise Tax fund shows a \$1,540,960 transfer to CCN to offset radio user fees in 2016. The CCN budget shows this transfer in from Pierce County, but shows it going into a replacement reserve fund, not offsetting radio user fees. The E911 Excise Tax fund does not show any budgeted transfers to CCN in 2017 or 2018, but the CCN budget shows revenue sourced from the "Pierce County E-911 \$.50 excise tax" in each of those years in the amount of \$1,085,490 and \$1,230,100, respectively. If these transfers do occur, it may be that the actual use of fund balance will be higher than projected.

<sup>25</sup> The South Sound 911 2017 budget shows that it expects \$2,263,470 from \$.20 Excise tax. The \$21,720 difference may be due to accrual basis of accounting since it is equal to approximately one month of revenue. However, reconciling the two budgets will result in expenditures higher than revenues, so it may be that the actual use of fund balance will be slightly higher than projected.

Table 36. Capital Outlays and Transfers Out from the E911 Excise Tax Fund

Cost Category	2016 Actual	2017 Budget	2018 Budget
Capital Outlay for Corrections Bureau Radio System Improvement Project	\$ 330,607	-	\$ 1,999,800
Transfer to Radio Communications (Motorola Contract for Implementation of the 700 and 410 Overlay)	1,000,000	1,000,000	1,000,000
Transfer to CCN for Radio System Replacement	1,540,960 <sup>26</sup>	<sup>27</sup>	<sup>28</sup>
Transfer to Planning and Public Works for Centerline Mapping		147,000	
<b>Total</b>	<b>\$ 2,854,567</b>	<b>\$ 1,147,200</b>	<b>\$ 2,999,800</b>

<sup>26</sup> DEM budget documents show that \$1,540,960 was transferred in 2016 to offset radio system user fees, but CCN budget shows that it went into the Radio System Replacement account.

<sup>27</sup> CCN 2017 budget shows revenue of \$1,093,880 from \$.50 E911 Tax; E911 fund does not show the transfer.

<sup>28</sup> CCN 2018 budget shows revenue of \$1,230,100 from \$.50 E911 Tax; E911 fund does not show the transfer.

## Appendix D Washington State County Expenses Eligible for Reimbursement from E911 Funds Based on WAC 118-66

Expenses for wireline service components, including

- Switching office enabling;
  - Automatic number identification (ANI);
  - Traffic studies between switching offices and the selective router;
  - ALI/DMS service;
  - Reverse ALI search capability.

Expenses for wireless components:

- Wireless Phase I E9-1-1 service components:
  - Phase I automatic location identification (ALI);
  - Phase I address;
  - Service control point Phase I capabilities;
  - Phase I ALI database;
  - Phase I interface to selective router;
  - Phase I interface to ALI database;
  - Phase I testing;
  - Phase I implementation plans;
  - Phase I implementation agreements;
  - Pseudo-ANI (P-ANI);
  - MSC Phase I software capabilities;
  - Traffic studies between the MSC and selective router;
  - Phase I ALI data circuits;
- Wireless E9-1-1 Phase II service components (including all Phase I components):
  - Location determination technology;
  - Phase II implementation plan;
  - Phase II testing;
  - MSC Phase II software capabilities;
  - Service control point Phase II capabilities; and
  - Mobile positioning center.

Expenses for components shared with wireline/VoIP and wireless enhanced 9-1-1 services:



- Statewide dialing items:
  - Coordinator professional development;
  - NG9-1-1 network;
  - 9-1-1 network equivalent (B.01/P.01 grade of service level required);
  - Selective routing;
  - Automatic location identification (ALI) database;
  - Traffic studies between selective router and PSAP;
  - Telecommunications service priority;
  - Language interpretive service;
  - Alternate routing and/or night service;
  - Customer premise equipment (CPE)/telephone system and maintenance;
  - TTY required for compliance with the Americans with Disabilities Act (ADA);
  - ANI/ALI controllers and necessary interfaces to send data to other PSAP equipment;
  - (xiii) ANI/ALI display equipment for primary PSAPs;
  - PSAP mapping and maintenance;
  - County 9-1-1 coordinator duties;
  - MSAG coordination and maintenance;
  - Mapping/GIS coordination and maintenance;
  - 9-1-1 information technology services;
  - 9-1-1 call receiver salaries and benefits;
  - 9-1-1 public education coordination; and
  - 9-1-1 training coordination.
- Basic service items:
  - Uninterruptible power supply (UPS) for PSAP enhanced 9-1-1 equipment and maintenance;
  - Route diversity between selective router and PSAP;
  - 9-1-1 Coordinator training;
  - MSAG training;
  - Mapping/GIS training;
  - Information technology (IT) training;
  - Call receiver training;
  - E9-1-1 mapping administration;
  - Instant call check equipment and maintenance;
  - Mapping display for call answering positions that are ANI/ALI equipped;
  - 9-1-1 Management information system;
  - Call detail recorder or printer and maintenance;
  - Headsets for 9-1-1 call receivers;

- Enhanced 9-1-1 document destruction; and
  - 9-1-1 coordinator electronic mail.
- Capital:
  - Logging recorder for 9-1-1 calls and maintenance;
  - Computer aided dispatch (CAD) system hardware and software and maintenance;
  - Auxiliary generator and generator maintenance to provide 9-1-1 eligible equipment/telephone services backup power;
  - Clock synchronizer and maintenance; and
  - Console furniture for 9-1-1 call receiving equipment and maintenance.

#### PSAP and 9-1-1 administration cost items

- Management services;
- Human resources services;
- Legal costs;
- Financial services;
- PSAP and 9-1-1 administration lease/purchase costs;
- E9-1-1 building repair and maintenance, and major systems replacement/repair;
- E9-1-1 property and liability insurance;
- PSAP and 9-1-1 administrative telephone system;
- E9-1-1/NG9-1-1 reserve accounts; and
- Radio communications services companies wireless enhanced 9-1-1 recovery expenses.

## Appendix E Pierce County E911 Program Office Annual Report to State on E911 Excise Tax Fund Expenditures

The following two pages contain the Pierce County E91 Program Office Annual Report to the State on the use of the E911 excise tax fund in 2016.

Pierce County				2016 Actual WAC 911 Center's Costs
Coordinator Professional Development (CPD) Expenses		Per Fiscal Year (FY)	FY18	
CPD1	Advisory Committee/Subcom Mtgs, Forums, ST Supported Trng	budgeted amount for 12 months	\$ 9,000	\$ 9,530.00
CPD2	E911 County Coordinator Training (maximum: \$6,000)	\$6,000	\$ 6,000	\$ 2,800.00
CPD3	Public Educational Material Development (maximum: \$5,000)	\$5,000	\$ 5,000	\$ 5,000.00
CPD4	911 Salaries /Benefits and Training (maximum \$13,500)	\$13,500	\$ 13,500	\$ 13,500.00
<i>This line item is a total of the lines listed below it. You can use the funds up to the capped amount (\$13,500) anyway you want per the items listed. Please let us know how you think you will use these funds.</i>		MSAG Coord Salary/Benefits	\$ 13,500	\$ 71,270.00
		MSAG Coord Training	\$ -	
		Mapping/GIS Coord Salary/Benefits	\$ -	\$ 168,930.00
		Mapping/GIS Coord Training	\$ -	
		IT Coord Salary/Benefits	\$ -	\$ 117,390.00
		IT Coord Training	\$ -	
CPD5	911 Call Receiver Training	\$500 / CR Capped \$15,000	\$ 15,000	\$ 15,000.00
CPD6	NG911 Prep Work for E911Net/Modernization	requires pre-approval	\$ -	\$ -
CPD7	E911 Telephone Interpretive Services	budgeted amount for 12 months	\$ 9,500	\$ 11,010.00
STWD	Statewide Network & Database (E911 Host/Remote Network)	budgeted amount for 12 months	\$ -	\$ -
TOTAL Coordinator Professional Development Section			\$ 58,000	\$ 414,430.00
BASIC SERVICE OPERATING EXPENSES		Per Fiscal Year (FY)	FY18	
S4	E911 County Coordinator	\$63,807	\$ 63,807	\$ 115,470.00
S5	MSAG/Mapping/GIS Coordinator	\$57,090	\$ 57,090	\$ 240,200.00
S6	Information Technology (IT) Salary	\$27,014	\$ 27,014	\$ 117,390.00
S7	911 Call Receiver Salaries	\$289,150	\$ 289,150	\$ 7,110,780.00
S8	Public Education Coordinator Salary	\$7,273	\$ 7,273	\$ 83,890.00
S9	Training Coordinator Salary	\$7,273	\$ 7,273	\$ -
B4	MSAG/Mapping/GIS Coordinator Training	\$5,000	\$ 5,000	
B5	IT Coordinator Training	\$10,000	\$ 10,000	
B6	911 Call Receiver Training	\$1,500 / CR \$ 61,500.00	\$ 198,000	\$ -
B7	E911 Mapping Administration	\$10,000	\$ 10,000	\$ 321,400.00
B12	Headsets for Call Receivers	up to \$2,000 per County	\$ 2,000	\$ 1,240.00
B13	Records Destruction	\$100	\$ 100	\$ 160.00
B14	County Coordinator E-Mail	\$500	\$ 500	\$ 2,190.00
TOTAL Basic Services			\$ 677,207	\$ 7,992,720.00
Capital Equipment Maintenance is calculated at \$24,700 times # of positions up to 6 per County				
S1.1	CPE / Telephone System Maintenance			\$ 19,560.00
S3.1	PSAP Mapping Maintenance			\$ 7,500.00
B1.1	UPS Maintenance			\$ -
B8.1	Instant Call Check Maintenance			\$ -
B10.1	MIS Maintenance			\$ -
B11.1	Call Detail Recorder or Printer Maintenance			\$ -
C1.1	Logging/Voice Recorder Maintenance			\$ -
C2.1	CAD Maintenance			\$ 156,000.00
C3.1	Auxiliary Generator Maintenance			\$ -
C4.1	Clock Synchronizer Maintenance			\$ -
C5.1	Call Receiver Console Furniture Maintenance			\$ -
			\$ 148,200	\$ 183,060.00

[illegible]

Appendix F South Sound 911 2018 Communications Budget

Table 37. South Sound 911 2018 Communications Budget

Category	Amount
Allocation Revenue	\$18,919,890
Sales Tax Revenue	16,534,710
Excise Tax Revenue	4,301,590
<b>Total Revenue</b>	<b>\$39,756,190</b>
Communications Salaries and Benefits	23,847,130
Communications Supplies	83,310
Communications Services	919,460
Administrative and IT Operations (costs allocated to supporting Communications)	2,535,170
Intergovernmental and Inter-fund	48,520
Capital	50,000
<b>Total Operations</b>	<b>\$27,483,590</b>
Transfer to Radio Debt Fund	5,691,600
Transfer to Facility Capital Fund	4,150,000
Transfer to Lease Reserve	2,300,000
Transfer to Radio User Fee Fund	850,000
<b>Total Expenditures</b>	<b>\$40,475,190</b>